



Tủ sách ViOlympic

ĐẶNG MINH TUẤN - NGUYỄN THỊ BÍCH PHƯƠNG

Tự luyện

# ViOlympic

5

TOÁN BẢNG  
TIẾNG ANH lớp

Math iolympic



NHÀ XUẤT BẢN GIÁO DỤC VIỆT NAM

## LỜI NÓI ĐẦU

Các em học sinh yêu quý!

Cuộc thi giải toán qua Internet (VIOlympic) là cuộc thi cấp Quốc gia do Bộ Giáo dục và Đào tạo tổ chức. Tập đoàn FPT, Trường Đại học FPT thực hiện, bắt đầu từ năm học 2008 – 2009. Từ năm học 2013 – 2014, ban tổ chức mở thêm cuộc thi giải Toán bằng Tiếng Anh VIOlympic với 10 vòng thi, từ vòng thi số 1 đến số 6 là vòng thi tự luyện, từ vòng thi số 7 đến vòng thi số 10 là vòng thi cấp.

Đề học sinh làm quen với dạng bài thi hấp dẫn, kích thích tư duy và luyện tập trước khi thi trên máy tính, Tiểu ban nội dung của Ban tổ chức cấp Quốc gia biên soạn bộ sách "Tự Luyện VIOlympic Toán bằng Tiếng Anh". Bộ sách này gồm 4 cuốn dành cho các lớp 4; 5; 8 và 9, mỗi lớp có một tập với cấu trúc 10 vòng thi tương ứng với 10 vòng thi trên trang [www.math.violympic.vn](http://www.math.violympic.vn), mỗi vòng thi tương ứng với ba tuần học theo phân phối chương trình của Bộ Giáo dục và Đào tạo.

Khi làm xong mỗi vòng thi trong cuốn sách này, các em có thể truy cập Internet, vào địa chỉ: [www.math.violympic.vn](http://www.math.violympic.vn) để dự thi. Khi vào trang này, các em cần đọc kĩ phần *Trợ giúp* và làm theo hướng dẫn để có thể thi tốt.

Cảm ơn Công ty Cổ phần Sách dân tộc – Nhà xuất bản Giáo dục Việt Nam đã tạo điều kiện để cuốn sách tới được các em.

Các em hãy gửi các ý kiến góp ý cho các tác giả qua hình thư điện tử: [violympic@moet.edu.vn](mailto:violympic@moet.edu.vn) hoặc gửi qua bưu điện về địa chỉ: Phòng VIOlympic, Trường Đại học FPT, số 8 Tôn Thất Thuyết – Mỹ Đình – Từ Liêm – Hà Nội.

Chúc các em học môn Toán ngày càng say mê hơn, tiến bộ hơn và đạt kết quả cao nhất trong cuộc thi VIOlympic cũng như trong học tập.

CÁC TÁC GIẢ

## INSTRUCTIONS FOR USING GRADE 5 BOOK

### I. General instruction

"Self-study for 5<sup>th</sup> Grade Math VIOlympic" covers 10 rounds. From round 1 to round 8, each round consists of 2 corresponding contestation [www.violympic.vn](http://www.violympic.vn) page. Round 9 and round 10, each round consists of 1 corresponding contestation [www.violympic.vn](http://www.violympic.vn) pages.

Students should read carefully to determine the questions of each test. Instructions in Section II should be referred for complex contests.

For the test format of "Choose the correct answer", "Complete results on ...", "Overcome obstacles", "Golden Frog", "Kid Champion", students could directly write answers on the questions.

To take advantage of the books to apply effectively for the website tests, the instructions for test formats of Treasure, Hunting, Matching, Arrangement are as follows:

### II. Specific instructions for test format

#### 1. Selection of equal pairs



Example: Find the equal pairs of equal results in the below table's cells.

417 + 168	172 + 465	453 + 374	237 + 415
1	2	3	4
380 + 272	813	392 + 193	555 + 209
5	6	7	8
637	519 + 308	475 + 354	518 + 318
9	10	11	12
583 + 246	452 + 361	464 + 372	764
13	14	15	16
481 + 373	680 + 182	862	528 + 326
17	18	19	20

Cells are numbered in the order of:

Cell No. 1	Cell No. 2	Cell No. 3	Cell No. 4
Cell No. 5	Cell No. 6	Cell No. 7	Cell No. 8
Cell No. 9	Cell No. 10	Cell No. 11	Cell No. 12
Cell No. 13	Cell No. 14	Cell No. 14	Cell No. 16
Cell No. 17	Cell No. 18	Cell No. 19	Cell No. 20

Step 1: Calculate the value of table cells.

Step 2: Compare the calculated values, we can see:

Cell No. 1 and Cell No. 7 have the same value of 585,.... so:

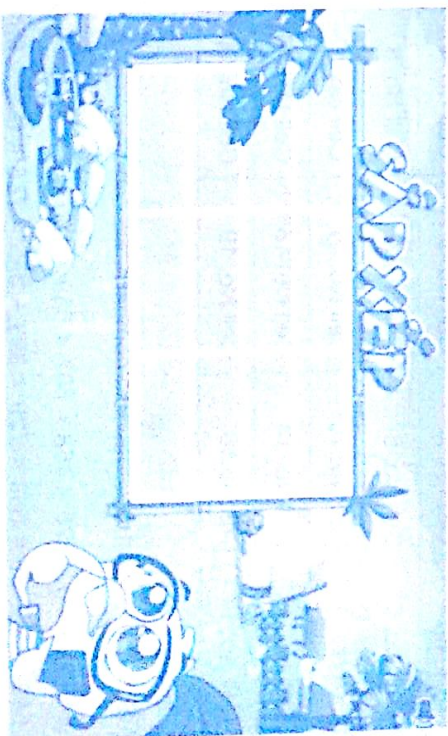
- Cell No. 1 and Cell No. 7 is an equal pair.
- Cell No. 2 and Cell No. 9 is an equal pair.
- Cell No. 5 and Cell No. 4 is an equal pair.

- Cell No. 16 and Cell No. 8 is an equal pair.
- Cell No. 6 and Cell No. 14 is an equal pair.
- Cell No. 10 and Cell No. 3 is an equal pair.
- Cell No. 13 and Cell No. 11 is an equal pair.
- Cell No. 12 and Cell No. 15 is an equal pair.
- Cell No. 17 and Cell No. 20 is an equal pair.
- Cell No. 18 and Cell No. 19 is an equal pair.

Step 3: Write the answers:

- 1 and 7 ; 9 and 2 ; 5 and 4 ; 16 and 8 ; 14 and 6 ;
- 10 and 3 ; 13 and 11 ; 12 and 15 ; 17 and 20 ; 18 and 19.

## 2. Order arrangement



Example: Write the numerical data of the tables cells with ascending order.

# PART I. PRACTICAL TESTS

## ROUND 1

### TEST 1

#### EXAM 1 Golden Frog

Choose the correct answer in 4 available answers.



Question 1. Fill in the blank :  $1m^2 = \dots\dots\dots cm^2$ .

- Choose the correct answer.
- (A) 10000
  - (B) 1000
  - (C) 100
  - (D) 1000000

Question 2. Choose the correct answer.

Which of the following fractions is greater than  $\frac{1}{2}$ ?

- (A)  $\frac{2}{3}$
- (B)  $\frac{7}{9}$
- (C)  $\frac{11}{12}$
- (D)  $\frac{14}{8}$

Question 3. Choose the correct answer.

Calculate:  $\frac{3}{4} \times \frac{5}{4} = \dots\dots\dots$

- (A)  $\frac{8}{4}$
- (B)  $\frac{15}{16}$
- (C)  $\frac{15}{4}$
- (D)  $\frac{8}{16}$

Question 4. Choose the correct answer.

Which fraction is equal to  $\frac{51}{34}$ ?

- (A)  $\frac{17}{11}$
- (B)  $\frac{3}{4}$
- (C)  $\frac{102}{48}$
- (D)  $\frac{9}{6}$

Question 5. Choose the correct answer.

Calculate:  $\frac{1}{2} - \frac{2}{5} + \frac{5}{3} = \dots\dots\dots$

- (A)  $\frac{49}{30}$
- (B)  $\frac{52}{30}$
- (C)  $\frac{53}{30}$
- (D)  $\frac{51}{30}$

296	(1)	963	(2)	507	(3)	$125 \times 3$	(4)
$746 + 455$	(5)	198	(6)	839	(7)	649	(8)
851	(9)	468	(10)	$204 \times 3$	(11)	886	(12)
589	(13)	$393 + 393$	(14)	936	(15)	$130 \times 2 + 330$	(16)
$707 - 38$	(17)	$439 \times 2$	(18)	729	(19)	$458 + 528$	(20)

Cells are numbered in the order of:

Cell No. 1	Cell No. 2	Cell No. 3	Cell No. 4
Cell No. 5	Cell No. 6	Cell No. 7	Cell No. 8
Cell No. 9	Cell No. 10	Cell No. 11	Cell No. 12
Cell No. 13	Cell No. 14	Cell No. 15	Cell No. 16
Cell No. 17	Cell No. 18	Cell No. 19	Cell No. 20

Step 1: Calculate the values and compare, we can see:

$$198 < 296 < 125 \times 3 = 375 < 468 < 507 < 589 < 130 \times 2 + 330 = 590 < 204 \times 3 = 612 < 649 < 707 - 38 = 669 < 729 < 393 + 393 = 786 < 839 < 851 < 439 \times 2 = 878 < 886 < 476 + 455 = 931 < 936 < 963 < 458 + 528 = 986.$$

Step 2: Basing on comparison, we can write the number of cells with ascending order as follows:

$$(6) - (1) - (4) - (10) - (3) - (13) - (16) - (11) - (8) - (17) \\ - (19) - (14) - (7) - (9) - (18) - (12) - (5) - (15) - (2) - (20)$$

Question 6. Choose the correct answer.

Which of the following sums is less than 1?

- A  $\frac{1}{3} + \frac{4}{5}$      B  $\frac{3}{4} + \frac{1}{2}$      C  $\frac{2}{3} + \frac{1}{4}$      D  $\frac{3}{5} + \frac{2}{3}$

Question 7. Choose the correct answer.

Convert  $\frac{7}{5}$  to a fraction with a denominator of 100.

- A  $\frac{7}{100}$      B  $\frac{140}{100}$      C  $\frac{700}{500}$      D  $\frac{14}{100}$

Question 8. Fill in the blank.

37 minutes 48 seconds + 29 minutes 36 seconds = ... minutes 24 seconds.

Choose the correct answer.

- A 67     B 66     C 65     D 68

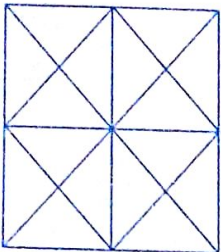
Question 9. Choose the correct answer.

Write  $\frac{123123}{456456}$  in simplest form.

- A  $\frac{123}{456}$      B  $\frac{1}{2}$      C  $\frac{41}{152}$      D  $\frac{101}{1001}$

Question 10. Choose the correct answer.

How many triangles are there in the following figure?



- A 44     B 43     C 42     D Uncountable

## EXAM 2 Kid Champion

Let's reach the intellectual peak by answering the questions below.



Question 1. Find x if  $\frac{7}{12} + \frac{x}{3} = \frac{5}{4}$ .

Answer: The value of x is .....

Question 2. The average of two numbers is 252. The greater number is 42 units more than the smaller number. Find two numbers.

Answer: The greater number is .....  
The smaller number is .....

Question 3. Write  $7\frac{3}{4}$  as an improper fraction.

Answer: The result is .....

Question 4. Compare:  $\frac{23}{25}$  and  $\frac{11}{12}$ .

Answer:  $\frac{23}{25}$  .....  $\frac{11}{12}$ .

Question 5. 6 pizzas cost \$12. How much does Jane have to pay for 200 pizzas?

Answer: Jane has to pay \$... for 200 pizzas.

Question 6. Fill in the blank:  $2\frac{1}{7} + 3\frac{2}{7} = \dots$ .

Answer: The correct number fill in the blank is .....

Question 7. Find x if  $\frac{1}{4} \times \frac{1}{x} = \frac{1}{20}$ .

Answer: The value of x is .....

Question 8. Calculate:  $\frac{75}{100} + \frac{18}{21} + \frac{19}{32} + \frac{1}{4} + \frac{3}{21} + \frac{13}{32}$ .

Answer: The result is .....

**Question 9.** It took six workers, three hours to do a work. How many workers are needed to do the work in two hours?

Answer: There are ..... workers needed to do the work in two hours.

**Question 10.** If both numerator and denominator of a fraction are increased by 3 units then the new fraction will be equal to  $\frac{6}{17}$ . Find the original fraction

if the sum of its numerator and its denominator is 40.

Answer: This fraction is .....

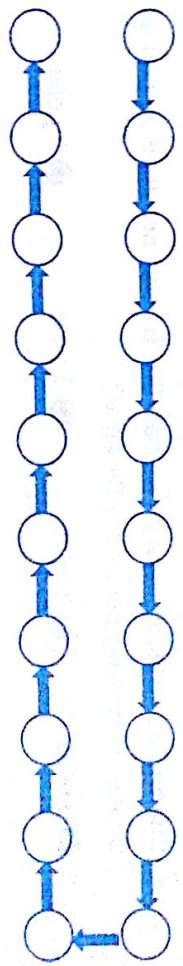
**EXAM 3 Arrangement**

Arrange numbers or calculations in order from least to greatest then fill their sequence numbers in  below.



$\frac{13}{100}$	$\frac{3}{2}$	$\frac{8}{7}$	$\frac{1}{3}$
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
$\frac{2}{5}$	$\frac{21}{100}$	$\frac{1}{4}$	$\frac{11}{100}$
<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8
$\frac{7}{100}$	$\frac{1}{2}$	$\frac{7}{6}$	$\frac{5}{4}$
<input type="radio"/> 9	<input type="radio"/> 10	<input type="radio"/> 11	<input type="radio"/> 12
$\frac{3}{4}$	$\frac{1}{100}$	$\frac{23}{100}$	$\frac{6}{5}$
<input type="radio"/> 13	<input type="radio"/> 14	<input type="radio"/> 15	<input type="radio"/> 16
$\frac{17}{100}$	$\frac{19}{100}$	$\frac{3}{100}$	$\frac{9}{100}$
<input type="radio"/> 17	<input type="radio"/> 18	<input type="radio"/> 19	<input type="radio"/> 20

The correct order is:



## TEST 2

### EXAM 1 Golden Frog

Choose the correct answer in 4 available answers.



Question 1. Choose the correct answer.

$$\frac{3}{10} + \frac{1}{2} = \dots$$

- A  $\frac{7}{5}$     
  B  $\frac{5}{4}$     
  C  $\frac{6}{5}$     
  D  $\frac{3}{10}$

Question 2. Choose the correct answer.

Which of the following expressions is equal to  $\frac{8}{30}$ ?

- A  $\frac{11}{30} - \frac{4}{20}$     
  B  $\frac{2}{30} \times \frac{4}{30}$     
  C  $\frac{8}{15} : \frac{1}{2}$     
  D  $\frac{1}{15} + \frac{1}{5}$

Question 3. Choose the correct answer.

Find the value of x if  $\frac{2}{3} \times x = \frac{3}{2}$ .

- A  $\frac{4}{3}$     
  B  $\frac{2}{3}$     
  C  $\frac{1}{9}$     
  D  $\frac{9}{4}$

Question 4. Choose the correct answer.

Calculate:  $4 : \frac{3}{7} + \frac{1}{2}$ .

- A  $\frac{49}{6}$     
  B  $9\frac{5}{6}$     
  C  $\frac{31}{14}$     
  D  $2\frac{3}{14}$

Question 5. Choose the correct answer.

Charlie has eighteen pens more than Bill. Bill has one third as pen as Charlie. How many pens does Bill have?

- A 9 pens    
  B 6 pens    
  C 3 pens    
  D 2 pens

Question 6. Choose the correct answer.

Write  $\frac{42}{63}$  in lowest term.

- A  $\frac{4}{6}$     
  B  $\frac{4}{9}$     
  C  $\frac{2}{3}$     
  D  $\frac{6}{9}$

Question 7. Choose the correct answer.

Which of the following fractions is greater than  $\frac{24}{36}$ ?

- A  $\frac{9}{12}$     
  B  $\frac{8}{18}$     
  C  $\frac{7}{12}$     
  D  $\frac{5}{9}$

Question 8. Choose the correct answer.

The sum of two numbers is the greatest – four digit number and their ratio is the smallest – two digit number. Find these numbers.

- A 900 and 99    
  B 909 and 9090    
  C 989 and 10    
  D 999 and 989

Question 9. Choose the correct answer.

Alice's mother is now four times as old as she. Four years ago, her mother was thirty years more than her. How old is Alice now?

- A 12    
  B 6    
  C 10    
  D 8

Question 10. Choose the correct answer.

Find the 123<sup>rd</sup> term of the following sequence:

1 : 2 : 0 : 0 : 3 : 1 : 2 : 0 : 0 : 3 : 1 : 2 : 0 : 0 : 3 : .....

- A 1    
  B 2    
  C 0    
  D 3

## EXAM 2 Kid Champion

Let's reach the intellectual peak by answering the questions below.



**Question 1.** Calculate:  $\frac{3}{5} : 2 + \frac{1}{2}$ . (Write your answer as a fraction in simplest form)

Answer: The result is .....

**Question 2.** There are 40 students in a class.  $\frac{2}{5}$  of them are good at Math. How many students in the class are not good at Math?

Answer: There are ..... students.

**Question 3.** Convert  $\frac{3}{4}$  to a fraction with a denominator of 100.

Answer:  $\frac{3}{4} = \frac{\dots}{100}$ .

**Question 4.** Find x if x is a natural number and  $\frac{8}{15} : x = \frac{4}{75}$ .

Answer: The value of x is .....

**Question 5.** Write the following fractions in order from greatest to least

$$\frac{3}{5}, \frac{8}{7}, \frac{1}{2}, \frac{10}{9}, \frac{4}{5}$$

Answer: The correct order is: .....

**Question 6.** Find the natural number x if  $\frac{3}{8} < \frac{x}{4} < \frac{31}{56}$ .

Answer: The value of x is .....

**Question 7.** Compare:  $\frac{1}{2} + \frac{1}{4} + \frac{1}{8}$  and  $\frac{7}{8}$ .

Answer:  $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} \dots \frac{7}{8}$ .

**Question 8.** Calculate:  $4\frac{2}{5} + 5\frac{6}{9} + 2\frac{3}{4} + \frac{3}{5} + \frac{1}{3} + \frac{1}{4}$ .

Answer: The result is .....

**Question 9.** The sum of two numbers is 1200. If the ratio of these numbers is 3 : 7 then the smaller number is.....

**Question 10.** 7 hamburgers and 5 ice creams cost \$32. 10 hamburgers and 5 ice creams cost \$35. How much does a hamburger cost?

Answer: A hamburger cost \$.....

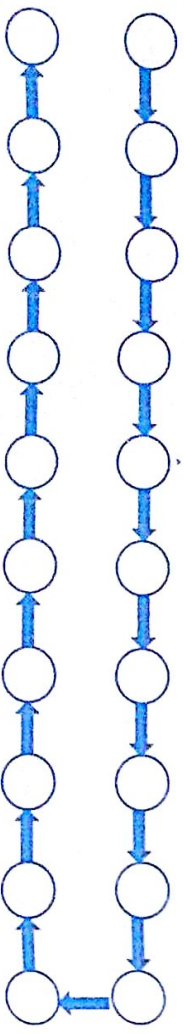


### EXAM 3 Arrangement

Arrange numbers or calculations in order from least to greatest then fill their sequence numbers in  below.

$\frac{7}{2}$	$\frac{17}{3}$	$\frac{49}{8}$	$\frac{18}{9}$
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
$\frac{59}{10}$	$\frac{17}{9}$	$\frac{35}{6}$	5
<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8
$\frac{23}{4}$	$\frac{11}{2}$	$\frac{53}{9}$	$\frac{29}{5}$
<input type="radio"/> 9	<input type="radio"/> 10	<input type="radio"/> 11	<input type="radio"/> 12
$\frac{17}{10}$	$\frac{41}{7}$	$\frac{5}{2}$	$\frac{19}{9}$
<input type="radio"/> 13	<input type="radio"/> 14	<input type="radio"/> 15	<input type="radio"/> 16
6	$\frac{9}{2}$	$\frac{19}{8}$	$\frac{47}{8}$
<input type="radio"/> 17	<input type="radio"/> 18	<input type="radio"/> 19	<input type="radio"/> 20

The correct order is:



### ROUND 2

#### TEST 1

### EXAM 1 Matching

Choose pairs of numbers or calculations have the same value in the following table's cells then fill their sequence number in  below.

$\frac{1}{3} + \frac{2}{5}$	$\frac{1}{5} + \frac{1}{7}$	$\frac{7}{3} \times \frac{1}{3}$	$\frac{4}{11}$
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
$\frac{1}{5} + \frac{2}{3} \times \frac{2}{5}$	$\frac{7}{12}$	$\frac{9}{21}$	$\frac{7}{9}$
<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8
$\frac{3}{4}$	$\frac{1}{2} \times \frac{3}{5}$	$\frac{2}{7} \times \frac{6}{5}$	$\frac{11}{15}$
<input type="radio"/> 9	<input type="radio"/> 10	<input type="radio"/> 11	<input type="radio"/> 12
$\frac{1}{2} \times \frac{1}{11}$	$\frac{1}{3} \times \frac{4}{7}$	$\frac{5}{6}$	$\frac{6}{11} + \frac{7}{11}$
<input type="radio"/> 13	<input type="radio"/> 14	<input type="radio"/> 15	<input type="radio"/> 16
$\frac{3}{11} + \frac{1}{11}$	$\frac{7}{15}$	$\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$	$\frac{3}{7}$
<input type="radio"/> 17	<input type="radio"/> 18	<input type="radio"/> 19	<input type="radio"/> 20

Answer: Pairs of numbers or calculations have the same value are:

- and  ;  and  ;  and
- and  ;  and  ;  and
- and  ;  and

## EXAM 2 Jump Over

You have to drive your car passing 10 obstacles to finish. In order to overcome each obstacle, you have to answer correctly one question in that obstacle. Are you ready?



Question 1. Find the least common denominator of  $\frac{1}{15}$  and  $\frac{5}{12}$ .

Answer: The least common denominator of  $\frac{1}{15}$  and  $\frac{5}{12}$  is .....

Question 2. Write  $\frac{27}{63}$  in lowest term.

Answer: The result is .....

Question 3. Convert 5km 5m to m.

Answer: 5km 5m = .....m.

Question 4. Write two next fractions in the sequence:  $\frac{7}{9}$ ,  $\frac{11}{12}$ ,  $\frac{15}{15}$ ,  $\frac{19}{18}$ , .....

Answer: Two next fractions in this sequence are ... and .....

Question 5. Find the area of the following rectangle in square centimeter if it's perimeter is 76cm.



Answer: The area of this rectangle is .....cm<sup>2</sup>. 25cm

Question 6. The average of 63, 35 and X is equal to 45. Find X.

Answer: The value of X is .....

Question 7. Find a fraction if the sum of it's denominator and it's numerator is 27 and it equals  $\frac{4}{5}$ .

Answer: This fraction is .....

Question 8. Which sign (+; -; x; :;) makes the sentence come true?

$$\frac{5}{2} \times \frac{5}{3} \dots \frac{9}{3} = \frac{7}{6}$$

Answer: The correct sign is .....

Question 9. Find the least 5 - digit number such that the sum of its digits is 15.

Answer: This number is ....

Question 10. Calculate:  $1\frac{2}{3} \times 1\frac{2}{5} \times 1\frac{2}{7} \times \dots \times 1\frac{2}{99}$ .

Answer: The result is .....

(Write your answer as a fraction in simplest form.)

## EXAM 3 Grid Ins

Fill in the blanks with the correct answers to answer 10 questions below.



Question 1. Calculate:  $\frac{9}{7} - \frac{5}{6}$ .

Answer: The result is .....

Question 2. Compare:  $\frac{2}{5} + \frac{1}{5}$  and  $\frac{3}{2} \times \frac{1}{2}$ .

Answer:  $\frac{2}{5} + \frac{1}{5} \dots \frac{3}{2} \times \frac{1}{2}$ .

Question 3. Find x if  $\frac{2}{7} + x = \frac{5}{3}$ .

(Write your answer as a fraction in simplest form.)

Answer: The value of x is .....

**Question 4.** Convert  $5000\text{cm}^2$  to  $\text{dm}^2$ .

Answer:  $5000\text{cm}^2 = \dots\dots\text{dm}^2$ .

**Question 5.** The sum of mother's age and daughter's age is 48 years and daughter is  $\frac{1}{3}$  as old as mother. How old is daughter?

Answer: Daughter is  $\dots\dots$  years old.

**Question 6.** Two iPhone 6 Plus mobiles cost \$598. How much do five iPhone 6 Plus mobiles cost?

Answer: Five iPhone 6 Plus mobiles cost \$ $\dots\dots$ .

**Question 7.** Find  $m$  if  $m$  is divisible by 100 and  $6275 < m < 6400$ .

Answer: The value of  $m$  is  $\dots\dots$ .

**Question 8.** Calculate:  $\frac{1}{2 \times 3} + \frac{1}{3 \times 4} + \frac{1}{4 \times 5} + \dots + \frac{1}{98 \times 99}$ .

(Write your answer as a fraction in simplest form.)

Answer: The result is  $\dots\dots$ .

**Question 9.** Find the last digit of the product:

$$5 \times 15 \times 25 \times \dots \times 95.$$

Answer: The last digit of the product is  $\dots\dots$ .

**Question 10.** If both denominator and numerator of fraction  $\frac{14}{19}$  are decreased

by  $X$  units then new fraction will be equal to  $\frac{2}{3}$ . Find  $X$ .

Answer: The value of  $X$  is  $\dots\dots$ .

**TEST 2**

**EXAM 1 Matching**

Choose pairs of numbers or calculations have the same value in the following table's cells then fill their sequence number in  below.

$\frac{15}{7}$	$\frac{2 \times 1}{3 \times 5}$	$\frac{1 + 1}{3 + 5}$	$\frac{7}{6}$
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
$\frac{1}{3} : 8$	$\frac{16}{25}$	$\frac{1 + 2}{9 + 3}$	$\frac{5}{4}$
<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8
$\frac{151515}{121212}$	$\frac{2}{3} : \frac{3}{5}$	$\frac{11}{9}$	$\frac{1}{7} : \frac{1}{3} : \frac{1}{5}$
<input type="radio"/> 9	<input type="radio"/> 10	<input type="radio"/> 11	<input type="radio"/> 12
$\frac{2 + 3 \times 4}{18}$	$7 \times \frac{1}{2} \times \frac{1}{3}$	$1 + \frac{1}{9}$	$\frac{1}{5} + \frac{1}{2} - \frac{1}{6}$
<input type="radio"/> 13	<input type="radio"/> 14	<input type="radio"/> 15	<input type="radio"/> 16
$\frac{3 \times 5 + 1}{12 + 13}$	$\frac{5}{4} \times \frac{1}{3} : 10$	$\frac{1}{3} - \frac{1}{5}$	$\frac{1}{3} : \frac{3}{11}$
<input type="radio"/> 17	<input type="radio"/> 18	<input type="radio"/> 19	<input type="radio"/> 20

Answer: Pairs of numbers or calculations have the same value are:

- and  ;  and  ;  and  ;  and
- and  ;  and  ;  and  ;  and
- and  ;  and  ;  and  ;  and

## EXAM 2 Jump Over

You have to drive your car passing 10 obstacles to finish. In order to overcome each obstacle, you have to answer correctly one question in that obstacle. Are you ready?



**Question 1.** Calculate:  $\frac{5}{9} - \frac{2}{5}$ .

Answer: The result is .....

**Question 2.** Choose the correct answer.

Which of the following calculations is equal to  $\frac{67}{100}$  ?

- A  $\frac{6}{100} + \frac{7}{100}$      B  $\frac{7}{10} - \frac{7}{100}$      C  $\frac{6}{10} + \frac{7}{100}$      D  $\frac{7}{10} - \frac{7}{100}$

**Question 3.** Choose the correct answer.

Which of the following fractions is the greatest number?

- A  $\frac{19}{5}$      B  $\frac{11}{3}$      C  $\frac{27}{7}$      D  $\frac{35}{9}$

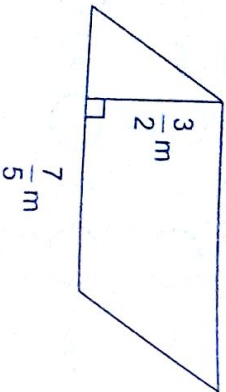
**Question 4.** Write  $7\frac{1}{3}$  as an improper fraction.

Answer:  $7\frac{1}{3} = \frac{\dots}{\dots}$ .

**Question 5.** Find x if  $\frac{1}{7} + \frac{1}{5} - x = \frac{10}{35}$ .

Answer: The value of x is .....

**Question 6.** Calculate the area of the following parallelogram in square centimeter.



Answer: The area of the parallelogram is ..... cm<sup>2</sup>.

**Question 7.** Find the value of  $\frac{3}{5} + \frac{7}{5} \times b$  if  $b = \frac{1}{2}$ .

Answer:  $\frac{3}{5} + \frac{7}{5} \times b = \dots$

(Write fraction in simplest form.)

**Question 8.** The sum of two natural numbers is 520 and there are nineteen other natural numbers between them. Find the two numbers.

Answer: The greater number is .....

The smaller number is .....

**Question 9.** If delete the last digit of a 3-digit number then it will be decreased by 93 units. Find the original number.

Answer: The original number is .....

**Question 10.** How many 2-digit numbers are divisible by 3?

Answer: There are ..... numbers.

## EXAM 3 Grid Ins

Fill in the blanks with the correct answers to answer 10 questions below.



**Question 1.** Write  $5\frac{1}{6}$  as an improper fraction.

Answer:  $5\frac{1}{6} = \frac{\dots}{\dots}$ .

**Question 2.** The sum of the length and the width of a rectangle is 24cm. Find it's perimeter.

Answer: The perimeter of the rectangle is .....cm.

**Question 3.** Write fraction  $\frac{42}{70}$  in lowest term.

Answer: The result is .....

Question 4. Which sign (+; -; x; ÷) make the sentence come true:

$$\frac{5}{2} \dots \frac{3}{7} = \frac{15}{14} ?$$

Answer: The correct sign is .....

Question 5. Calculate:  $2\frac{1}{3} \times 1\frac{3}{5}$ .

(Write your answer as a fraction in simplest form.)

Answer: The result is .....

Question 6.  $\frac{3}{5}$  of the tickets sold at a zoo were child tickets. How many child tickets did the zoo sell if it sold 65 tickets in altogether?

Answer: ..... child tickets were sold.

Question 7. Convert 3 tons 75 kilograms to kilogram.

Answer: 3 ton 75kg = .....kg.

Question 8. It took 10 people, 7 days to complete a work. How many people was needed in order to complete this work in 5 days?

Answer: There are ... people needed.

Question 9. The denominator of a fraction is 2 units more than it's numerator and this fraction is equal to  $\frac{2}{3}$ . Find this fraction.

Answer: This fraction is .....

Question 10. Compare:  $\frac{1}{2} + \frac{3}{4} + \frac{5}{6}$  and  $\frac{5}{4} + \frac{1}{6} + \frac{2}{3}$ .

Answer:  $\frac{1}{2} + \frac{3}{4} + \frac{5}{6} \dots \frac{5}{4} + \frac{1}{6} + \frac{2}{3}$ .

## ROUND 3

### TEST 1

#### EXAM 1 Grid Ins

Fill in the blanks with the correct answers to answer 10 questions below.



Question 1. Calculate:  $1\frac{3}{4} + 2\frac{1}{5}$ .

(Write your answer as a fraction in simplest form.)

Answer: The result is .....

Question 2. Two days ago, Angela ate  $\frac{1}{3}$  of a cake. Yesterday, she ate  $\frac{2}{5}$  of

this cake. What fraction of this cake did Angela eat in altogether?  
(Write your answer as a fraction in lowest term.)

Answer: Angela ate ..... of this cake in altogether.

Question 3. Calculate:  $1\frac{7}{9} : 3\frac{5}{9}$ .

(Write your answer as a fraction in simplest form.)

Answer: The result is .....

Question 4. Thomas is 12 years old. His father is  $3\frac{1}{2}$  as old as he. His mother is

3 years younger than his father. How old is Thomas's mother?

Answer: Thomas's mother is ... years old.

Question 5. Find two consecutive natural numbers if their sum is 2015.

Answer: The greater number is .....

The smaller number is .....

**Question 6.** How many natural numbers are not greater than 1665 and divisible by 5?

Answer: There are ..... numbers.

**Question 7.** Calculate:

$$\left(\frac{1}{2} + 1\right) \times \left(\frac{1}{3} + 1\right) \times \left(\frac{1}{4} + 1\right) \times \dots \times \left(\frac{1}{9} + 1\right).$$

Answer: The result is .....

**Question 8.** The sum of three consecutive even numbers is 960. Find the three numbers.

Answer: The three numbers are ..... ; ..... ; .....

(Write the numbers in order from least to greatest.)

**Question 9.** Find  $m$  if  $m$  is a natural number and  $\frac{2}{5} < \frac{m}{8} < \frac{3}{5}$ .

Answer: The value of  $m$  is .....

**Question 10.** If we put the digit 1 at the beginning of a 5-digit number, we get a number three times smaller than number gotten if we put the digit 1 at the end of this number. Find this number.

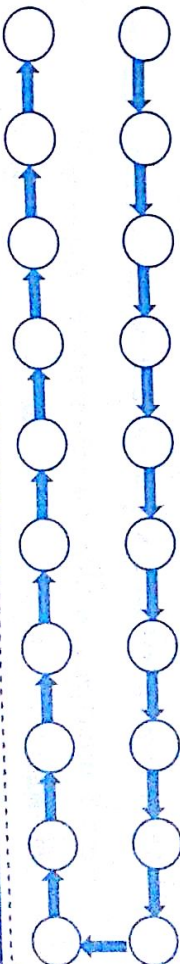
Answer: This number is .....

**EXAM 2 Arrangement**

Arrange numbers or calculations in order from least to greatest then fill their sequence numbers in  below.

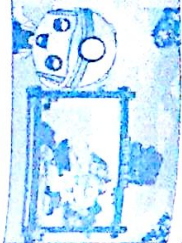
$\frac{1}{200}$	$\frac{2}{49}$	$\frac{4}{47}$	$\frac{1}{350}$	$\frac{1}{700}$	$\frac{5}{45}$	$\frac{1}{2} \times \frac{1}{8} \times \frac{1}{50}$
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7
$\frac{5}{46}$	$\frac{1}{100}$	$\frac{1}{350}$	$\frac{1}{700}$	$\frac{5}{45}$	$\frac{1}{45}$	$\frac{1}{45}$
<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8	<input type="radio"/> 9	<input type="radio"/> 10	<input type="radio"/> 11
$\frac{1}{50}$	$\frac{1}{300}$	$\frac{3}{47}$	$\left(\frac{1}{2} - \frac{1}{4}\right) \times \frac{1}{125}$	$\frac{1}{90} \times \frac{1}{10}$	$\frac{7}{45}$	$\frac{5}{47}$
<input type="radio"/> 9	<input type="radio"/> 10	<input type="radio"/> 11	<input type="radio"/> 12	<input type="radio"/> 13	<input type="radio"/> 14	<input type="radio"/> 15
$\frac{1}{90} \times \frac{1}{10}$	$\frac{1}{45}$	$\frac{1}{100}$	$\frac{5}{47}$	$\frac{1}{3} \times \frac{1}{49}$	$\frac{1}{600}$	$\frac{1}{20} \times \frac{1}{20}$
<input type="radio"/> 13	<input type="radio"/> 14	<input type="radio"/> 15	<input type="radio"/> 16	<input type="radio"/> 17	<input type="radio"/> 18	<input type="radio"/> 19
$\frac{1}{3} \times \frac{1}{49}$	$\frac{1}{600}$	$\frac{1}{20} \times \frac{1}{20}$	$\frac{1}{48}$	$\frac{1}{17}$	$\frac{1}{18}$	$\frac{1}{19}$
<input type="radio"/> 17	<input type="radio"/> 18	<input type="radio"/> 19	<input type="radio"/> 20	<input type="radio"/> 20	<input type="radio"/> 20	<input type="radio"/> 20

The correct order is:



**EXAM 3****Treasure Hunting**

Let's help the miner to go through the maze by answering 10 questions to reach the destination.



**Question 1.** Choose the correct answer.

Which of the following fractions is the greatest number?

- A  $\frac{1}{23}$      B  $\frac{5}{114}$      C  $\frac{1}{24}$      D  $\frac{5}{115}$

**Question 2.** Choose the correct answer.

Calculate:  $\frac{13}{12} - 1\frac{2}{3} \times \frac{1}{4}$ .

- A  $\frac{5}{12}$      B  $\frac{7}{12}$      C  $\frac{3}{4}$      D  $\frac{2}{3}$

**Question 3.** Choose the correct answer.

The average of two numbers is 95. The first number is  $\frac{2}{3}$  of the second

number. Find these two numbers.

- A 76 and 114     B 57 and 133  
 C 152 and 38     D 107 and 83

**Question 4.** Choose the correct answer.

If  $x : 2\frac{1}{3} = 3\frac{2}{7}$  then the value of x is:

- A  $7\frac{1}{3}$      B  $7\frac{2}{7}$      C  $7\frac{2}{3}$      D  $7\frac{1}{7}$

**Question 5.** Choose the correct answer.

The area of the first circle is  $\frac{2}{3}$  the area of the second circle. If the area of the second circle is  $120\text{m}^2$  then the area of the first circle is:

- A  $180\text{m}^2$      B  $80\text{m}^2$      C  $40\text{m}^2$      D  $60\text{m}^2$

**Question 6.** Choose the correct answer.

Which of the following sentences is false?

- A  $\frac{2}{3} > \frac{3}{4}$      B  $2015 < 2014$   
 C  $\frac{131313}{252525} = \frac{26}{50}$      D  $2014 < 2013$   
 E  $\frac{3}{5} = \frac{39}{65}$

**Question 7.** Choose the correct answer.

The next fraction in the sequence:  $\frac{1}{2}, \frac{1}{5}, \frac{1}{8}, \frac{1}{11}, \dots$  is

- A  $\frac{1}{15}$      B  $\frac{1}{13}$   
 C  $\frac{1}{14}$      D Another fraction.

**Question 8.** Choose the correct answer.

The average of all 5-digit even numbers is .....

- A 54999     B 109998     C 50000     D 100000

**Question 9.** Choose the correct answer.

Given the fraction  $\frac{15}{17}$ . If both denominator and numerator of this fraction are decreased by X units then the new fraction will be equal to  $\frac{52}{65}$ .

The value of X is

- A 5     B 8     C 9     D 7

**Question 10.** Choose the correct answer.

Calculate:  $A = \frac{1 \times 2 \times 3 + 2 \times 4 \times 6 + 3 \times 6 \times 9}{2 \times 3 \times 12 + 4 \times 6 \times 24 + 6 \times 9 \times 36}$

- A  $\frac{1}{4}$      B  $\frac{1}{3}$      C  $\frac{1}{2}$      D  $\frac{1}{12}$

## TEST 2

### EXAM 1 Grid Ins

Fill in the blanks with the correct answers to answer 10 questions below.



**Question 1.** Calculate:  $1\frac{2}{5} \times 3\frac{5}{7}$ .

(Write your answer as a fraction in simplest form.)

Answer: The result is .....

**Question 2.** Jessica is 8 years old. Her grandmother is  $7\frac{1}{2}$  of her age. How old

is Jessica's grandmother?

Answer: Her grandmother is ..... years old.

**Question 3.** Calculate:  $2\frac{1}{15} + \frac{1}{3} \times 3\frac{1}{5}$ .

(Write your answer as a fraction in simplest form.)

Answer: The result is .....

**Question 4.** There are 49 students in a class. Boy students are  $\frac{3}{4}$  the number of

girl students. How many girl students are there in this class?

Answer: There are ..... girl students.

**Question 5.** Find a fraction if the sum of its denominator and its numerator is 52 and its denominator is 18 units more than its numerator.

Answer: This fraction is .....

**Question 6.** Compare:  $A = \frac{1+3+5+\dots+119}{60}$  and  $B = \frac{2+4+6+\dots+118}{59}$ .

Answer: A ..... B.

**Question 7.** Find the value of  $5 \times b + 2 \times c$  if 2005bc is divisible by 2, 5 and 9.

Answer:  $5 \times b + 2 \times c = \dots\dots\dots$

**Question 8.** Let  $A = 12345678910111213\dots\dots$

(A was written by consecutive natural numbers.)

Find the last digit of A if A has 103 digits.

Answer: The last digit of A is .....

**Question 9.** Find the last digit of the product:

$$(1+2+3+\dots+9) \times (1+2+3+\dots+9) \times \dots \times (1+2+3+\dots+9).$$

Answer: The last digit of this product is .....

**Question 10.** There are 60 students in a class. If 35 students play badminton, 30 students play table tennis and 7 students do not play any sports. How many students play both badminton and table tennis?

Answer: There are ..... students.

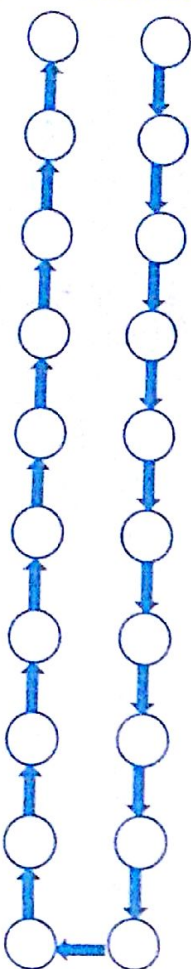


### EXAM 2 Arrangement

Arrange numbers or calculations in order from least to greatest then fill their sequence numbers in  below.

$\frac{1}{5}$	$\frac{7}{8}$	$1\frac{6}{7}$	$\frac{2}{3}$
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
$\frac{4}{5}$	$1\frac{4}{5}$	$1\frac{1}{3}$	2
<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8
$1\frac{2}{3}$	$\frac{5}{6}$	$\frac{3}{4}$	$1\frac{1}{4}$
<input type="radio"/> 9	<input type="radio"/> 10	<input type="radio"/> 11	<input type="radio"/> 12
$\frac{1}{3}$	$\frac{7}{8}$	$1\frac{3}{4}$	$1\frac{5}{6}$
<input type="radio"/> 13	<input type="radio"/> 14	<input type="radio"/> 15	<input type="radio"/> 16
1	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{6}{7}$
<input type="radio"/> 17	<input type="radio"/> 18	<input type="radio"/> 19	<input type="radio"/> 20

The correct order is:



### EXAM 3 Treasure Hunting

Let's help the miner to go through the maze by answering 10 questions to reach the destination.

Question 1. Choose the correct answer.

Which of the following fractions is equal to  $\frac{2}{3}$  ?

- A  $\frac{181818}{212121}$    
  B  $\frac{16}{24}$    
  C  $\frac{14}{20}$    
  D  $\frac{27}{18}$

Question 2. Choose the correct answer.

Calculate:  $(\frac{1}{3} + \frac{2}{4}) \div \frac{7}{12}$ .

- A  $\frac{7}{31}$    
  B  $\frac{38}{144}$    
  C  $\frac{38}{12}$    
  D  $\frac{31}{7}$

Question 3. Choose the correct answer.

The sum of the number of lions and monkeys in a zoo is 40 and lions are  $\frac{1}{3}$  the number of monkeys. How many monkeys are there in the zoo?

- A 10   
  B 27   
  C 18   
  D 30

Question 4. Choose the correct answer.

The average of two numbers is 95. The first number is  $\frac{2}{3}$  of the second number. Find the first number.

- A 38   
  B 114   
  C 76   
  D 57

Question 5. Choose the correct answer.

Find x if  $(\frac{1}{2} + \frac{1}{3} + \frac{1}{4}) \times x = 1 + \frac{2}{3} + \frac{1}{2}$ .

- A 4   
  B 3   
  C 2   
  D 5

# ROUND 4

## TEST 1

### EXAM 1 Golden Frog

Choose the correct answer in 4 available answers.



**Question 6.** Choose the correct answer.

The average of three numbers is 1988. The first number is 1984. The third number is 2 units more than the second number. Find the third number.

- A 1991     B 1989     C 1988     D 1985

**Question 7.** Choose the correct answer.

The sum of two fractions is  $\frac{45}{23}$  and the first fraction is one quarter of the second fraction. Find the first fraction.

- A  $\frac{9}{23}$      B  $\frac{36}{23}$      C  $\frac{7}{23}$      D  $\frac{28}{23}$

**Question 8.** Choose the correct answer.

The average of 5 consecutive odd numbers is 123. Find the greatest number.

- A 123     B 127     C 125     D 129

**Question 9.** Choose the correct answer.

Find  $n$  if  $n$  is a natural number and  $\frac{n}{7} < \frac{2}{3} < \frac{n+1}{7}$ .

- A 1     B 2     C 3     D 4

**Question 10.** Choose the correct answer.

The sum of two numbers is 463 and there are eighteen even numbers between these numbers. Find the greater number.

- A 213     B 249     C 250     D 241

**Question 1.** Choose the correct answer.

Fill in the blank with the correct decimal number:  $\frac{5}{10}$  m = .....m.

- A 0.0005     B 0.5     C 0.05     D 0.005

**Question 2.** Choose the correct answer.

Write  $\frac{16}{1000}$  as a decimal number.

- A 1.6     B 0.16     C 0.016     D 16000

**Question 3.** Choose the correct answer.

In 721.986, in which place is the 9?

- A tens     B tenths     C hundreds     D hundredths

**Question 4.** Choose the correct answer.

Fill in the blank with the correct number:  $3\text{m}^2 7\text{dm}^2 = \dots\dots\text{m}^2$ .

- A 3.7     B 3.007     C 3.0007     D 3.07

**Question 5.** Choose the correct answer.

Write  $21\frac{3}{10}$  as a decimal number.

- A 21.3     B 2.13     C 0.213     D 21.03

**Question 6.** Choose the correct answer.

Write 12.0205 as a decimal fraction.

- A  $\frac{120205}{1000}$      B  $\frac{12205}{10000}$      C  $\frac{1225}{1000}$      D  $\frac{120205}{10000}$

Question 7. Choose the correct answer.

Which of the following fractions is equal to 0.625?

- A  $\frac{5}{8}$
- B  $\frac{625}{100}$
- C  $\frac{25}{4}$
- D  $\frac{15}{16}$

Question 8. Choose the correct answer.

Fill in the blank with a correct number:  $9.\square 234 < 9.1216$ .

- A 3
- B 2
- C 1
- D 0

Question 9. Choose the correct answer.

Calculate and write the result by decimal number.

$$\frac{1}{2 \times 3} + \frac{1}{3 \times 4} + \frac{1}{4 \times 5} + \dots + \frac{1}{9 \times 10}$$

- A 0.4
- B 0.5
- C 0.25
- D 0.75

Question 10. Choose the correct answer.

Find m if m is a natural number and  $m < 16.7645 < m + 1$ .

- A 16
- B 17
- C 14
- D 15

### EXAM 2 Kid Champion

Let's reach the intellectual peak by answering the questions below.



Question 1. In 376.258 which digit is in the tens place?

Answer: The digit in the tens place is .....

Question 2. In 342.156 which digit is in the hundredths place?

Answer: The digit in the hundredths place is .....

Question 3. Find the next decimal number in the sequence:

3.01 ; 3.02 ; 3.03 ; .....

Answer: The next decimal number in this sequence is .....

Question 4. Write  $\frac{324}{100}$  as a decimal number.

Answer: The result is .....

Question 5. Calculate:  $2.76 + 5.23$ .

Answer: The result is .....

Question 6. Convert  $25357\text{cm}^2$  to  $\text{m}^2$ .

Answer:  $25357\text{cm}^2 = \dots\dots\text{m}^2$ .

Question 7. Convert 42.3m to m and cm.

Answer:  $42.3\text{m} = \dots\dots\text{m} \dots\dots\text{cm}$ .

Question 8. Find x if x is a natural number and  $0.79 < \frac{x}{25} < 0.81$ .

Answer: The value of x is .....

Question 9. Find the least 5 - distinct digit decimal number.

Answer: The least 5 - distinct digit decimal number is .....

Question 10. Find the greatest value of m if m is a natural number and  $3.72 + m < 12.36$ .

Answer: The greatest value of m is .....

### EXAM 3 Grid Ins

Fill in the blanks with the correct answers to answer 10 questions below.



Question 1. In 718.3452 which digit is in the thousandths place?

Answer: The digit in the thousandths place is .....

Question 2. Compare: 0.4 and  $\frac{5}{100}$ .

Answer:  $0.4 \dots\dots \frac{5}{100}$ .

Question 3. Write the following decimal numbers in order from least to greatest:

4.6 ; 5.03 ; 3.45 ; 5.3 ; 4.06.

Answer: The correct order is: ... ; ... ; ... ; ... ; ...

Question 4. Fill in the blank with the correct decimal number:

$4\text{dm}^2 35\text{cm}^2 = \dots \dots \text{dm}^2$ .

Answer: The correct decimal number fill in the blank is .....

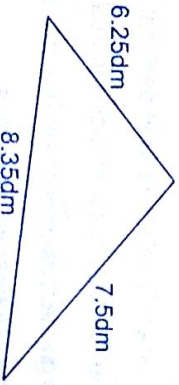
Question 5. Calculate:  $b + 2.5 + a$  if  $a + b = 34.754$ .

Answer:  $b + 2.5 + a = \dots \dots$

Question 6. Calculate:  $4.53 + 12.76 + 23.28$ .

Answer: The result is .....

Question 7. Calculate the perimeter of the following triangle:



Answer: The perimeter of the triangle is .....

Question 8. Find  $n$  if  $n$  is a natural number and  $n + 1 < 4.75523 < n + 2$ .

Answer: The value of  $n$  is .....

Question 9. Compare:  $\overline{a.2c} + \overline{7.b5}$  and  $\overline{a.bc} + \overline{7.23} + 0.02$ .

Answer:  $\overline{a.2c} + \overline{7.b5} \dots \dots \overline{a.bc} + \overline{7.23} + 0.02$ .

Question 10. Find  $a$ ,  $b$  if they are two consecutive natural numbers and  $a < 1.2 + 1.3 + 1.4 < b$ .

Answer: The value of  $a$  is .....

The value of  $b$  is .....

## TEST 2

### EXAM 1 Golden Frog

Choose the correct answer in 4 available answers.

Question 1. Choose the correct answer.

Fill in the blank with the correct number:

$$\frac{6}{100}\text{kg} = \dots \dots \text{kg}.$$

- A 0.06       B 0.6       C 0.006       D 0.0006

Question 2. Choose the correct answer.

In 721.986, in which place is the 7?

- A hundredths       B tenths       C hundreds       D tens

Question 3. Choose the correct answer.

Which sign makes the sentence true?

$0.346 \dots \dots 0.3460$ .

- A <       B =       C >       D +

Question 4. Choose the correct answer.

Fill in the blank with the correct number:

4 ton 217kg = .....

- A 4.0217       B 4.217       C 42.17       D 421.7

Question 5. Choose the correct answer.

Write  $3\frac{27}{10000}$  as a decimal number.

- A 3.27       B 3.027       C 3.0027       D 3.00027

Question 6. Choose the correct answer.

Which of the following decimal numbers is equal to 3.9800?

- A 3.908       B 3.0098       C 3.098       D 3.98

**Question 7.** Choose the correct answer.

Write 0.15 as a fraction in simplest form.

- A  $\frac{15}{100}$        B  $\frac{3}{20}$        C  $\frac{15}{10}$        D  $\frac{3}{2}$

**Question 8.** Choose the correct answer.

Find a if a is 3 times of b; b is  $\frac{1}{4}$  of c and  $c = \frac{3}{5}$ .

- A 0.9       B 0.45       C 0.18       D 0.75

**Question 9.** Choose the correct answer.

Find the greatest value of x if it is a natural number and  $x < 9.745$ .

- A 9       B 8       C 7       D 10

**Question 10.** Choose the correct answer.

Find x if  $ab3.\overline{738} < ab3.\overline{7x4} < ab3.\overline{753}$ .

- A 3       B 4       C 5       D 6

### EXAM 2 Kid Champion

Let's reach the intellectual peak by answering the questions below.



**Question 1.** In 376.258 which digit is in the hundredths place?

Answer: The digit in the hundredths place is ....

**Question 2.** Convert 4 ton 15kg to ton.

Answer: 4 ton 15kg = ..... ton.

**Question 3.** Find the next decimal number in the sequence:

21.2 ; 23.5 ; 25.8 ; 27.11 ; .....

Answer: The next decimal number in this sequence is .....

**Question 4.** Compare: 2m 3cm and 2.3m.

Answer: 2m 3cm ..... 2.3m.

**Question 5.** Calculate:  $a + b$  if  $a = 3.15$  and  $b = 8.26$ .

Answer:  $a + b =$  .....

**Question 6.** Write  $4\frac{53}{100}$  as a decimal number.

Answer: The result is .....

**Question 7.** Calculate:  $27.765 - 13.64 + 8.123$ .

Answer: The result is .....

**Question 8.** Find a, b if they are two consecutive natural numbers and  $a < 23.4535 < b$ .

Answer: The value of a is .....

The value of b is .....

**Question 9.** Find a decimal number if it is decreased by 2.7, the result is increased by 3.5 then the last result is 7.5.

Answer: This number is .....

**Question 10.** Find the greatest value of m if m is a natural number and  $3.72 + m < 12.36$ .

Answer: The greatest value of m is .....

### EXAM 3 Grid Ins

Fill in the blanks with the correct answers to answer 10 questions below.



**Question 1.** In 718.3452 which digit is in the tens place?

Answer: The digit in the tens place is .....

**Question 2.** Compare: 0.34 and  $\frac{340}{1000}$ .

Answer: 0.34 .....  $\frac{340}{1000}$ .

## ROUND 5

### TEST 1

#### EXAM 1 Treasure Hunting

Let's help the miner to go through the maze by answering 10 questions to reach the destination.



Question 3. Which of the following decimal numbers is the greatest number?

6.04 ; 5.36 ; 3.89 ; 7.02 ; 4.75.

Answer: The greatest decimal number is .....

Question 4. Fill in the blank with the correct decimal number:

7Kg 25g = .....kg.

Answer: The correct decimal number is .....

Question 5. Compare: A = 3.45 + 2.4 + 7.64 and B = 4.43 + 1.7 + 7.32.

Answer: A ..... B.

Question 6. Find x if  $x + 14.63 = 27.721$ .

Answer: The value of x is .....

Question 7. The area of a rectangle is  $7232\text{cm}^2$ . The area of a circle is  $5346\text{cm}^2$ .

Calculate the sum of area of this rectangle and this circle.

Answer: The sum of area of the circle and the rectangle is ..... $\text{dm}^2$ .

Question 8. Compare: A =  $\overline{1.b5} + \overline{a.23} + \overline{4.61c}$  and B =  $\overline{a.b0c} + \overline{5.79}$ .

Answer: A ..... B.

Question 9. How many natural numbers n such that  $n < 7.25 < n + 3$ ?

Answer: There are ..... numbers.

Question 10. Find a, b if they are two consecutive even numbers and

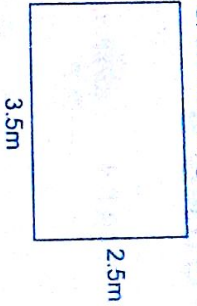
$$a + 1 < 11.6443 < b.$$

Answer: The value of a is .....

The value of b is .....

- Question 1. Calculate:  $87.23 - 25.76 = \dots\dots\dots$
- Choose the correct number to fill in the blank.
- A 61.47       B 60.47       C 61.57       D 60.57
- Question 2. If  $x + 5.42 = 13.76$  then  $x = \dots\dots\dots$
- Choose the correct number to fill in the blank.
- A 8.24       B 8.34       C 7.43       D 8.43
- Question 3. If  $a = 1.25$  and  $b = 7$  then  $a \times b = \dots\dots\dots$
- Choose the correct number to fill in the blank.
- A 8.85       B 8.65       C 8.175       D 8.75
- Question 4. Calculate:  $4.25 \times 2.5 = \dots\dots\dots$
- Choose the correct number to fill in the blank.
- A 11.625       B 106.25       C 10.625       D 116.25
- Question 5. A milk factory produced 589.5 liters of milk in 6 hours. How much milk, on average, did the factory produce per hour?
- Choose the correct answer:
- A 98.125 liters       B 98.25 liters
- C 97.25 liters       D 97.125 liters

Question 6. The area of the following rectangle is:



- A 7.75m<sup>2</sup>     B 9.75m<sup>2</sup>     C 8.25m<sup>2</sup>     D 8.75m<sup>2</sup>

Question 7. Find two decimal numbers if their sum is 30.3 and their difference is 3.1.

Answer: Two numbers are:

- A 17.8 and 12.5     B 16.3 and 14  
 C 16.7 and 13.6     D 17.6 and 12.7

Question 8. The sum of two decimal numbers is 20.1. If the first number is increased by 5 times and the second number is unchanged then new sum will equal 70.5.

The first number is .....

- A 12.6     B 7.5     C 8.5     D 11.6

Question 9. The difference of two decimal numbers is 2.85. If the greater number is increased by 3 times and the less number is unchanged then the new difference will equal 17.31.

The greater number is .....

- A 5.38     B 8.23     C 7.23     D 4.38

Question 10.



The missing number in the is .....

- A 7.93     B 9.74     C 8.93     D 10.24

### EXAM 2 Grid Ins

Fill in the blanks with the correct answers to answer 10 questions below.



Question 1.  $23.75 + \dots = 58.123$ .

The missing number is .....

Question 2. Find  $x$  if  $3 \times x = 38.1$ .

Answer: The value of  $x$  is .....

Question 3. Calculate:  $3.7 \times 9.2 - 12.5 \div 2$ .

Answer: The result is .....

Question 4. Find  $x$  if  $x : 4.35 = 6.3$ .

Answer: The value of  $x$  is .....

Question 5.  $12.5 \times 5 + \dots \times 4 = 73.3$ .

The missing number is .....

Question 6. Compare:  $A = 2.175 \times 5$  and  $B = 10 + 0.8 + 0.071 + 0.005$ .

Answer: A ..... B.

Question 7. If  $x = y : 2$ ;  $y = z : 3$  and  $z + 14.68 = 40.48$  then the value of  $x$  is .....

Question 8. Find  $a$  if  $1.01 \times ab = 8b.4a$ .

Answer: The value of  $a$  is .....

Question 9. John's weight is 67.5 pounds and Sarah's weight is 26.5 pounds. If both John and Sarah lose  $x$  pounds weight then Sarah's weight will be equal to  $\frac{1}{3}$  of John's weight. The value of  $x$  is .....

Question 10. The area of a rectangle is  $30.6\text{cm}^2$ . If its length is increased by 3cm and its width is unchanged then its area will equal  $41.4\text{cm}^2$ . Find its width.

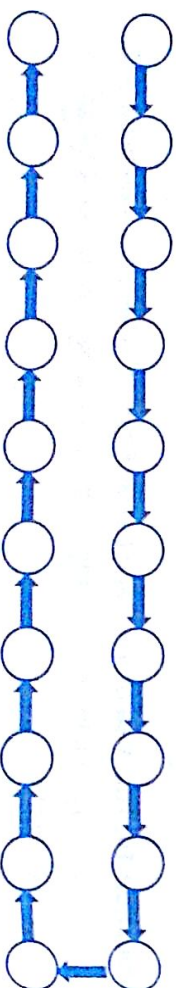
Answer: The width of the rectangle is ..... cm.

### EXAM 3 Arrangement

Arrange numbers or calculations in order from least to greatest then fill their sequence numbers in  below.

9.01	32.1 : 3	5.2 × 2	4.06
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
0.109 × 100	3.07	5.6 + 4.5	2 × 5.3
<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8
6.04	The least 2 - digit natural number which has two digits the same	7.03	1.09
<input type="radio"/> 9	<input type="radio"/> 10	<input type="radio"/> 11	<input type="radio"/> 12
25.6 - 15.3	8.02	1.08 × 10	10
<input type="radio"/> 13	<input type="radio"/> 14	<input type="radio"/> 15	<input type="radio"/> 16
2.08	2.1 × 5	5.05	$10\frac{1}{5}$
<input type="radio"/> 17	<input type="radio"/> 18	<input type="radio"/> 19	<input type="radio"/> 20

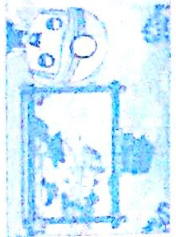
The correct order is:



### TEST 2

#### EXAM 1 Treasure Hunting

Let's help the miner to go through the maze by answering 10 questions to reach the destination.



Question 1. Calculate:  $12.3 \times 4$ .

Choose the correct answer.

- A 48.2
- B 49.2
- C 49.02
- D 48.02

Question 2. Find x if  $x = 0.00003 \times 10$ .

Answer: The value of x is

- A 0.00003
- B 0.0003
- C 0.0030
- D 0.03

Question 3. Find the value of x + 2 if  $23.4 \times 0.2 = x$ .

Answer: The value of x + 2 is

- A 6.68
- B 4.48
- C 4.68
- D 6.48

Question 4. Calculate:  $7.429 \times 100$ .

Answer: The result is

- A 7.429
- B 74.29
- C 742.9
- D 7429

Question 5. Fill in the blank with the correct number:

$$5 \times \dots = 13.75.$$

Answer: The correct number is

- A 2.55
- B 3.75
- C 3.25
- D 2.75

Question 6. Calculate the perimeter of the following star.



Which of the following answers is not correct?

- A 2375cm
- B 23.75m
- C 23m 75dm
- D 23m 75cm



**Question 7.** If the sum of two decimal numbers is 27.2 and the greater number is seven times of the less number then the greater number is .....

Choose the correct answer.

- A 23.8
- B 25.2
- C 3.4
- D 4.4

**Question 8.** Calculate:  $1.1 + 1.2 + 1.3 + \dots + 9.8$ .

The result is

- A 245.25
- B 959.2
- C 490.5
- D 479.6

**Question 9.** The sum of two decimal numbers is 14.04. If the first number is increased by 5 times and the second number is increased by 2 times then the new sum will equal 35.1.

The first number is

- A 11.7
- B 2.34
- C 3.24
- D 10.8

**Question 10.** How many decimal numbers are there between 17 and 18 such that have one digit in fraction part?

Answer: There are

- A 11 numbers
- B 8 numbers
- C 9 numbers
- D 10 numbers

**EXAM 2 Grid Ins**  
Fill in the blanks with the correct answers to answer 10 questions below.



**Question 1.** Calculate:  $19.7 \times 6$ .

Answer: The result is .....

**Question 2.** Find x if  $23.4 : x = 3$ .

Answer: The value of x is .....

**Question 3.** Mrs. Emily used 0.93kg of flour to make a cake. How much flour did she use to make 100 such cakes?

Answer: She used .....kg of flour to make 100 such cakes.

**Question 4.** If  $x : y = 3 : 4$  and  $y \times 4 = 9.2$  then  $x + y =$  .....

**Question 5.** 1 kg of apples costs \$4.35 and 1 kg of grapes costs \$7.2. How much does Mrs. Marie have to pay for 2 kg of grapes and 3 kg of apples?

Answer: She has to pay \$.....

**Question 6.** Jane had \$40. She bought 5kg of mangoes at \$4.55 per kilogram. How much money did she have left?

Answer: She had \$..... left.

**Question 7.** Fill in the blank with the correct number:

$$23.4 \times 3 - \dots \times 10 = 15.6$$

Answer: The correct number is .....

**Question 8.** Find b if  $1.001 \times abc = a5c.2b9$ .

Answer: The value of b is .....

**Question 9.** The area of a rectangle is  $24.7m^2$ . If its length is decreased by 5 times and its width is increased by 6 times then its area will equal ..... $m^2$ .

**Question 10.** Find the next decimal number in this sequence:

- 1.5 ; 4.5 ; 13.5 ; 40.5 ; .....

Answer: The next decimal number in the sequence is .....

**Question 7.** If the sum of two decimal numbers is 27.2 and the greater number is seven times of the less number then the greater number is .....

Choose the correct answer.

- A 23.8
- B 25.2
- C 3.4
- D 4.4

**Question 8.** Calculate:  $1.1 + 1.2 + 1.3 + \dots + 9.8$ .

The result is

- A 245.25
- B 959.2
- C 490.5
- D 479.6

**Question 9.** The sum of two decimal numbers is 14.04. If the first number is increased by 5 times and the second number is increased by 2 times then the new sum will equal 35.1.

The first number is

- A 11.7
- B 2.34
- C 3.24
- D 10.8

**Question 10.** How many decimal numbers are there between 17 and 18 such that have one digit in fraction part?

Answer: There are

- A 11 numbers
- B 8 numbers
- C 9 numbers
- D 10 numbers

**EXAM 2** **Grid Ins**

Fill in the blanks with the correct answers to answer 10 questions below.



**Question 1.** Calculate:  $19.7 \times 6$ .

Answer: The result is .....

**Question 2.** Find x if  $23.4 : x = 3$ .

Answer: The value of x is .....

**Question 3.** Mrs. Emily used 0.93kg of flour to make a cake. How much flour did she use to make 100 such cakes?

Answer: She used .....kg of flour to make 100 such cakes.

**Question 4.** If  $x : y = 3.4$  and  $y \times 4 = 9.2$  then  $x + y = \dots$

**Question 5.** 1 kg of apples costs \$4.35 and 1 kg of grapes costs \$7.2. How much does Mrs. Marie have to pay for 2 kg of grapes and 3 kg of apples?

Answer: She has to pay \$.....

**Question 6.** Jane had \$40. She bought 5kg of mangoes at \$4.55 per kilogram. How much money did she have left?

Answer: She had \$..... left.

**Question 7.** Fill in the blank with the correct number:

$23.4 \times 3 - \dots \times 10 = 15.6$

Answer: The correct number is .....

**Question 8.** Find b if  $1.001 \times abc = a5c.2b9$ .

Answer: The value of b is .....

**Question 9.** The area of a rectangle is  $24.7m^2$ . If its length is decreased by 5 times and its width is increased by 6 times then its area will equal ..... $m^2$ .

**Question 10.** Find the next decimal number in this sequence:

- 1.5 ; 4.5 ; 13.5 ; 40.5 ; .....

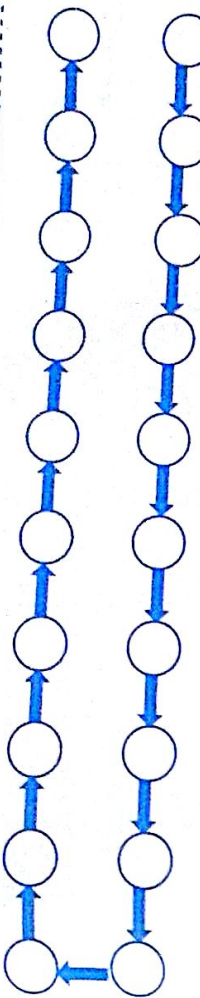
Answer: The next decimal number in the sequence is .....

### EXAM 3 Arrangement

Arrange numbers or calculations in order from least to greatest then fill their sequence numbers in  below.

$8.4 \times 9$	$7.6 + 3.5$	$0.8 \times 6 + 7.2$	$15.7 + 9.12 - 12.92$
1	2	3	4
The greatest 2-digit natural number which has two digits the same	$5.3 \times 3 + 15.3$	$2.9 \times 4$	The missing number in the blank
5	6	7	8
$5.7 \times 2$	$4.5 \times 7 + 15.4 \times 2$	$24.1 \times 4 - 8.4 \times 3$	$13.6 - 2.3$
9	10	11	12
$15.1 \times 4 + 83.4 : 3$	$34.5 : 3$	$10.1 \times 9$	$24.4 - 4.7 - 7.9$
13	14	15	16
$16.4 - 5.2$	$90.09 : 3 + 10.01$	$3.9 \times 3$	$3.1 \times 9 - 5.8$
17	18	19	20

The correct order is:



## ROUND 6

### TEST 1

### EXAM 1 Matching

Choose pairs of numbers or calculations have the same value in the following table's cells then fill their sequence number in  below.

$10\% + 3\% + 5\% + \dots + 99\%$	4.5	9 : 4	8 : 2.5
1	2	3	4
19 : 8	The value of $x + 2$ if $x \times 12 = 27$	7 : 5	24 : 2.5
5	6	7	8
$21\% + 23\%$	1.4	$25 : 111.11 \times 111.11$	1.25
9	10	11	12
3.25 : 2.6	19% + 25%	12.15 : 2.7	34 : 8
13	14	15	16
19.78 : 2.3 + 1	The value of $x$ if $x \times 12 = 27$	3.2	2.375
17	18	19	20

Answer: Pairs of numbers or calculations have the same value are:

- and  ;  and  ;  and  ;  and   
 and  ;  and  ;  and  ;  and   
 and  ;  and  ;  and  ;  and

**EXAM 2** Jump Over

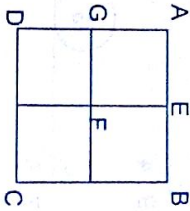
You have to drive your car passing 10 obstacles to finish. In order to overcome each obstacle, you have to answer correctly one question in that obstacle. Are you ready?



**Question 1.** Choose the correct answer.

Look at the following figure.

Find the area of the square AEEFG if the area of the square ABCD is  $15\text{cm}^2$ .



Answer: The area of the square AEEFG is

- A  $4\text{cm}^2$
- B  $3.75\text{cm}^2$
- C  $5\text{cm}^2$
- D  $1.5\text{cm}^2$

**Question 2.** Choose the correct answer.

Find  $x$  if  $x \times 5 = 17$ .

Answer: The value of  $x$  is:

- A 3.2
- B 5.4
- C 2.4
- D 3.4

**Question 3.** Choose the correct answer.

The percentage of the number of triangles to the number of rectangles in the following figure is:



- A 60%
- B 37.5%
- C 45.5%
- D 75%

**Question 4.** Choose the correct answer.

The value of  $15.98 : 4.7$  is

- A 3.7
- B 3.4
- C 5.4
- D 5.7

**Question 5.** A chocolate factory made 865 pounds of milk chocolate in 4 days

How much milk chocolate, on average, did the factory make per day?

Choose the correct answer.

- A 125.26 pounds
- B 216.52 pounds
- C 215.26 pounds
- D 216.25 pounds

**Question 6.** Fill in the blank with the correct number.

Each letter A ; B ; C ; D ; E ; F represents a single digit number.

Such that:  $A : B = C : D$

$$D : B = E : F.$$

If  $A = 7$  and  $B = 5$  then the value of  $F$  is .....

**Question 7.** Choose the correct answer.

Jane bought 12m of the lace. She cut it equally into 8 pieces. The length of each piece is:



- A 1m
- B 2m
- C 1.5m
- D 2.5m

**Question 8.** Fill in the blank with the correct number.



Which number should replace the question mark?

Answer: The number that should replace the question mark is .....

**Question 9.** Fill in the blank with the correct answer.

The percentage of girl students in a class is 48%. There are 26 boy students in this class. How many students are there in the class?

Answer: There are ..... students.

**Question 10.** Choose the correct answer.

What is the percentage of change from 20 to 25?

- A 20% increase
- B 20% decrease
- C 25% increase
- D 25% decrease

**EXAM 3**

**Grid Ins**

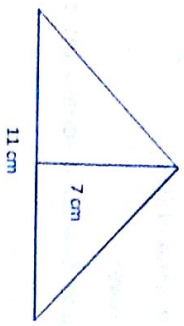
Fill in the blanks with the correct answers to answer 10 questions below.



**Question 1.** Write 90% as a decimal number.

The result is .....

**Question 2.** The area of the following triangle is .....  $\text{cm}^2$ .



**Question 3.** Find  $x$  if  $x \times 2.5 = 9.75$ .

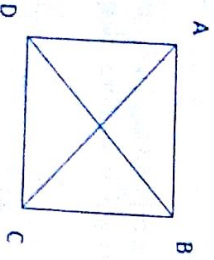
Answer: The value of  $x$  is .....

**Question 4.** If  $A @ B = (A - B) : 6$  then  $37 @ 16 =$  .....

**Question 5.** Find  $x$  if  $x\%$  of 152 is 114.

Answer: The value of  $x$  is .....

**Question 6.** Look at the following figure.



If the area of triangle ADC is  $15\text{dm}^2$  then 27% of area of the square ABCD is .....  $\text{dm}^2$ .

**Question 7.** 0.4% of 250 is .....

**Question 8.** If  $8 \times x = 20$  then the value of  $x : 5$  is .....

**Question 9.** Three shapes below are each given a value. Each value is a decimal number or whole number such that:

$$\diamond + \star = 5.5 ; \star - \diamond = 13.5 ; \star \times 2 = 8$$

Calculate:  $\star : \star : \diamond$

Answer: The result is .....

**Question 10.** Find B if 16% of B is 20.

Answer: B = .....

## TEST 2

### EXAM 1 Matching

Choose pairs of numbers or calculations have the same value in the following table's cells then fill their sequence number in  below.

54% - 25%	7.54	15.05 + 3.67	20% of the least 2-digit number
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
2 : 80	7.436 + 6.8	51% - 22%	4.48 + 3.06
<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8
7.436 - 6.8	15.05 - 3.67	5.5 : 2.5 - 0.2	20% of 20% of 20% of 1
<input type="radio"/> 9	<input type="radio"/> 10	<input type="radio"/> 11	<input type="radio"/> 12
0.036 : 4.5	20% of the greatest 2-digit number	2.356 - 3.44 : 2	41 : 2.5 + 3.4
<input type="radio"/> 13	<input type="radio"/> 14	<input type="radio"/> 15	<input type="radio"/> 16
3.7 + 2.56 × 3	18.72	25% of 20% of 25% of 2	14.236
<input type="radio"/> 17	<input type="radio"/> 18	<input type="radio"/> 19	<input type="radio"/> 20

Answer: Pairs of numbers or calculations have the same value are:

- and  :  and  :  and  :  and
- and  :  and  :  and  :  and
- and  :  and  .

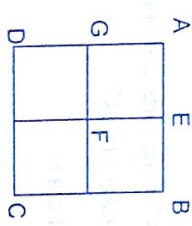
### EXAM 2 Jump Over

You have to drive your car passing 10 obstacles to finish. In order to overcome each obstacle, you have to answer correctly one question in that obstacle. Are you ready?

Question 1. Choose the correct answer.

Look at the following figure.

Find the area of the square AEEFG if the area of the square ABCD is 27 cm<sup>2</sup>.



Answer: The area of the square AEEFG is

- A 6.75cm<sup>2</sup>     B 3.75cm<sup>2</sup>     C 5.75cm<sup>2</sup>     D 4.75cm<sup>2</sup>

Question 2. Choose the correct answer.

Find x if  $x \times 4 = 35$ .

Answer: The value of x is:

- A 7.5     B 6.75     C 8.5     D 8.75

Question 3. Choose the correct answer.

Which of the following calculations has the least result?

- A 14.95 : 6.5     B 12 : 5     C 15 : 6     D 9.62 : 3.7

Answer: The calculation that has the least result is .....

Question 4. Choose the correct answer.

Look at these numbers.

0.15	0.9	0.5	0.3	0.09
------	-----	-----	-----	------

Two numbers in the box which have a product of 0.45 are:

- A 0.5 and 0.09     B 0.9 and 0.5     C 0.15 and 0.03     D 0.15 and 0.3

**Question 5.** Fill in the blank with the correct number.

5 kg of sugar cost \$4.75. Mary bought 6 kg of sugar and she had \$10.3 left. How much money did she have at first?  
Answer: She had \$..... at first.

**Question 6.** Choose the correct answer.

If  $A\# = A : 5$  and  $B\$ = 2.4 \times B$  then  $29\#\#\$ =$

- A 2.784       B 2.924       C 4.278       D 2.942

**Question 7.** Fill in the blank with the correct answer.

At Leslie's Hats, 25% of the 48 hats are baseball caps. How many baseball caps are there in the Leslie's Hats?

Answer: There are ..... baseball caps.

**Question 8.** Choose the correct answer.

Which is the least?

- A 25% of  $\frac{4}{7}$        B 25% of  $\frac{4}{5}$        C 25% of  $\frac{5}{8}$        D 25% of  $\frac{5}{6}$

**Question 9.** Fill in the blank with the correct answer.

The percentage of girl students in a class is 46%. There are 27 boy students in this class. How many students are there in the class?

Answer: There are ..... students.

**Question 10.** Choose the correct answer.

What is the percentage of change from 25 to 20?

- A 20% increase       B 20% decrease  
 C 25% increase       D 25% decrease

### EXAM 3 Grid Ins

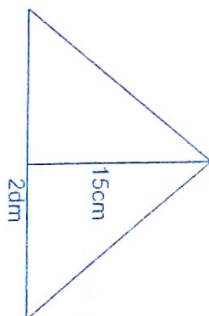
Fill in the blanks with the correct answers to answer 10 questions below.



**Question 1.** Write 75.6% as a decimal number.

The result is .....

**Question 2.** The area of the following triangle is .....  $\text{cm}^2$ .



**Question 3.** Find  $x$  if  $9.375 : x = 2.5$ .

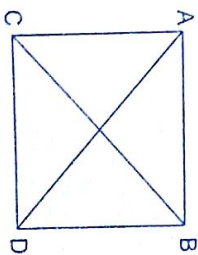
Answer: The value of  $x$  is .....

**Question 4.** If  $A \& B = A - B : 6$  then  $39 \& 15 =$  .....

**Question 5.** Find  $x$  if  $x\%$  of 125 is 85.

Answer: The value of  $x$  is .....

**Question 6.** Look at the following figure.

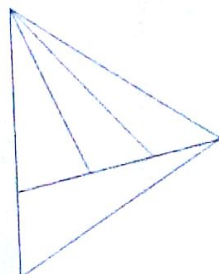


If the area of triangle ADC is  $15\text{dm}^2$  then 35% of area of the square ABCD is .....  $\text{dm}^2$ .

**Question 7.** 0.4% of 500 is .....

**Question 8.** If  $8 \times x = 20$  then the value of  $x : 4$  is .....

Question 9. How many triangles are there in the following figure?



Answer: There are ..... triangles.

Question 10. Each letter in the alphabet represent a single digit value such that:

$$\begin{array}{r} \text{ICE} \\ + \text{CREAM} \\ \hline \text{CAKES} \end{array}$$

If A = 3; I = 9; S = 8 then the value of R is .....

## ROUND 7

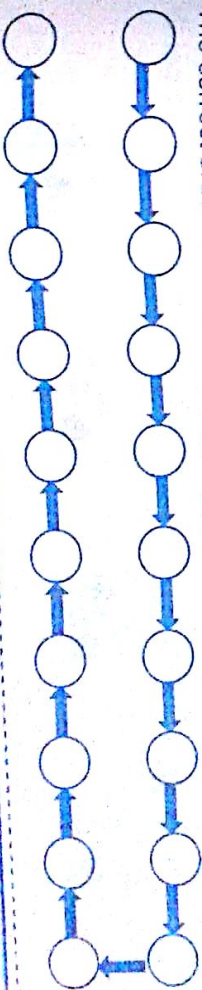
### TEST 1

#### EXAM 1 Arrangement

Arrange numbers or calculations in order from least to greatest then fill their sequence numbers in  below.

$\frac{1}{5} - \frac{1}{20}$	<input type="radio"/> 1	$1 - 0.3$	<input type="radio"/> 2	$\frac{1}{35} + \frac{1}{70}$	<input type="radio"/> 3	$102.6 - 101.6$	<input type="radio"/> 4
$0.01 + 0.03 + 0.05 + \dots + 0.59$	<input type="radio"/> 5	$\frac{3}{20} : 3$	<input type="radio"/> 6	$0.1 + 0.4$	<input type="radio"/> 7	$\frac{1}{10} : \frac{4}{3}$	<input type="radio"/> 8
$\frac{1}{30} + \frac{1}{15}$	<input type="radio"/> 9	$\frac{3}{100}$	<input type="radio"/> 10	$\frac{9}{10}$	<input type="radio"/> 11	$\frac{1}{5} + \frac{1}{10}$	<input type="radio"/> 12
$0.8 \times 4$	<input type="radio"/> 13	$0.2 + 0.2$	<input type="radio"/> 14	$\frac{3}{10} \times \frac{1}{9}$	<input type="radio"/> 15	$2.7 - 1.9$	<input type="radio"/> 16
$\frac{1}{20} \times \frac{3}{4}$	<input type="radio"/> 17	$1.34 + 0.66$	<input type="radio"/> 18	$\frac{1}{5} \times \frac{3}{2} \times \frac{1}{5}$	<input type="radio"/> 19	$0.2 \times 3$	<input type="radio"/> 20

The correct order is:





**EXAM 2 Golden Frog**

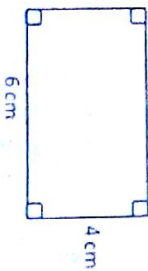
Choose the correct answer in 4 available answers.



Question 1. The value of the digit 4 in 3421.78 is .....

- A 40
- B 4
- C 0.04
- D 400

Question 2. The figure shows a rectangle. The ratio of its length to its perimeter is .....



- A 3 : 2
- B 3 : 10
- C 6 : 10
- D 6 : 4

Question 3. What fraction of cakes are either square or triangle ?



Choose the correct answer.

- A  $\frac{1}{7}$
- B  $\frac{4}{7}$
- C  $\frac{3}{7}$
- D  $\frac{2}{7}$

Question 4. Find x if  $\frac{3}{5} \times x = \frac{7}{20}$ .

Answer: The value of x is .....

- A  $\frac{7}{12}$
- B  $\frac{21}{100}$
- C  $\frac{35}{20}$
- D  $\frac{7}{4}$

Question 5. Write 84% as a fraction in simplest form.

The result is .....

- A  $\frac{84}{100}$
- B  $\frac{42}{50}$
- C  $\frac{7}{8}$
- D  $\frac{21}{25}$

Question 6. Find x if  $7.2386 < 7.23x2$ .

Answer: x = .....

- A 6
- B 9
- C 8
- D 7

Question 7. Who did wrong?



$$2.5 \times 7.4 + 12.8 = 31.3$$



$$3.6 : 2 - 0.75 = 1.05$$



$$1.3 \times 3.2 + 4.51 = 37.09$$



$$2 : 2 + 3.7 = 4.1$$



Question 8. Mrs. Jane had 64 kg of potatoes. She sold 40% of it at \$2 per kilogram.

She collected .....

- A \$51.2
- B \$62.5
- C \$32
- D \$102.4

Question 9. A bookstore has 200 magazines for men or women. 53% of the magazines are women's magazines. How many men's magazines does the bookstore have?

Answer: There are .....

- A 53 magazines
- B 94 magazines
- C 106 magazines
- D 47 magazines

Question 10. The value of  $\frac{2}{1 \times 3} + \frac{2}{3 \times 5} + \frac{2}{5 \times 7} + \dots + \frac{2}{77 \times 79}$  is .....

- A  $\frac{6081}{6083}$
- B  $\frac{74}{231}$
- C  $\frac{78}{79}$
- D  $\frac{156}{79}$

Fill in the blanks with the correct answers to answer 10 questions below.



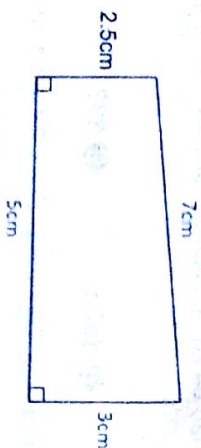
Question 1. Find X if  $\frac{3}{7} = \frac{X}{133}$ .

Answer: The value of X is .....

Question 2.  $\frac{2}{5}$  of the books in a library are comic books. What percentage of the books in the library are comic books?

Answer: The percentage of the comic books to all the books in the library is .....%.

Question 3. The area of the following figure is ..... dm<sup>2</sup>.



Question 4. Anna is 12 years old. Her father is  $3\frac{1}{4}$  as old as she. How old is Anna's father?

Answer: Anna's father is .....

Answer: Anna's father is ..... years old.

Question 5. A school has 27 classes. There are 40 students in each class. If there are 481 girls altogether, how many more boys than girls are there in the school?

Answer: There are ..... students.

Question 6. 35% of 2m 5cm is ..... dm.

Question 7. There were  $4\frac{1}{10}$  cakes on the tables. Peter ate  $1\frac{1}{2}$  cakes and Jack

ate  $2\frac{1}{5}$  cakes. How many cakes were left over?

(Write your answer as a decimal number.)

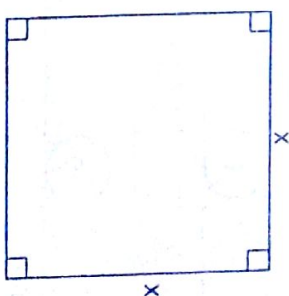
Answer: ..... of cakes were left over.

Question 8. If x is a natural number and  $x < 82334$  then the greatest value of x is .....

Question 9. Susan is 12 years old. Her mother is 75% as old as the sum of her age and her mother's age. How old is Susan's mother?

Answer: Susan's mother is ..... years old.

Question 10. Look at the following figure.



If x is increased by 20% then the area of the square will be increased by ..... %.

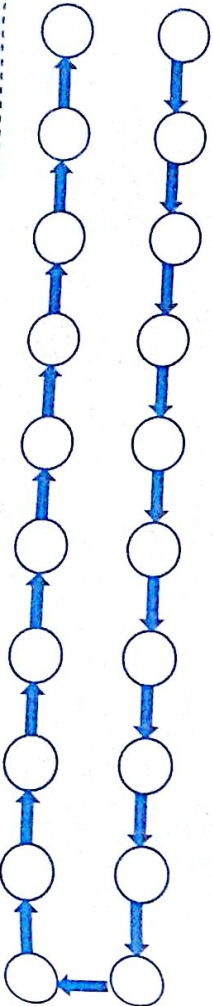
## TEST 2

### EXAM 1 Arrangement

Arrange numbers or calculations in order from least to greatest then fill their sequence numbers in  below.

25% of 16	$1 - \frac{1}{20}$	0.2 + 0.3	$1 + \frac{1}{10}$
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
$\frac{3}{15} : 2$	$0.01 + 0.02 + 0.03 + \dots + 0.55$	$\frac{1}{10} \times \frac{2}{9}$	The value of x if 30% of x is 3
<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8
0.1 + 0.3	$\frac{1}{2} \times \frac{3}{5} \times \frac{1}{5}$	1.2 - 0.5	$\frac{1}{20} \times \frac{2}{4}$
<input type="radio"/> 9	<input type="radio"/> 10	<input type="radio"/> 11	<input type="radio"/> 12
$1 - \frac{3}{15} - \frac{1}{5}$	20% of 25	$\frac{1}{35} + \frac{1}{70}$	2.95 + 0.05
<input type="radio"/> 13	<input type="radio"/> 14	<input type="radio"/> 15	<input type="radio"/> 16
2.8 - 2	$\frac{2}{100}$	$0.3 \times 2$	$\frac{1}{8} : \frac{5}{3}$
<input type="radio"/> 17	<input type="radio"/> 18	<input type="radio"/> 19	<input type="radio"/> 20

The correct order is:



### EXAM 2 Golden Frog

Choose the correct answer in 4 available answers.

Question 1. The value of the digit 7 in 3421.78 is .....

- A 7       B 70       C 0.7       D 700

Question 2. Which of the following fractions is smaller than  $\frac{1}{3}$ ?

- A  $\frac{5}{12}$        B  $\frac{8}{21}$        C  $\frac{10}{27}$        D  $\frac{5}{28}$

Question 3. The following table shows the length of four wires.

1 <sup>st</sup> wire	2 <sup>nd</sup> wire	3 <sup>rd</sup> wire	4 <sup>th</sup> wire
9m 5dm	9.5m	905cm	95dm

Which of these wires is the shortest one?

Answer: The shortest wire is .....

- A 1<sup>st</sup> wire       B 2<sup>nd</sup> wire  
 C 3<sup>rd</sup> wire       D 4<sup>th</sup> wire

Question 4. Write  $7\frac{1}{2}$  as a decimal number.

The result is .....

- A 7.1       B 7.2       C 7.4       D 7.5

Question 5. Find the smallest natural number that the sum of its digits is 14.

Answer: This number is .....

- A 102344       B 149       C 59       D 14

Question 6. Find two numbers if their quotient is 0.8 and their difference is 0.26.

Answer: Two numbers are .....

- A 1.04 and 1.3
- B 2.08 and 1.82
- C 2.6 and 2.34
- D 1.3 and 1.56

Question 7. Which of the following calculations equals 9.22?

- A  $3.97 + 6.25$
- B  $12.96 : 3 + 4.9$
- C  $36.88 : 4 - 1$
- D  $4.61 \times 1.5 + 0.5$

Question 8. The next letter or number in this logic sequence:

1; Z; 3; W; 9; T; 27; Q; 81; ..... is .....

- A R
- B 84
- C N
- D 243

Question 9. The sum of two consecutive odd numbers is 604.

The greater number is .....

- A 209
- B 301
- C 303
- D 307

Question 10. How many 3 - digit numbers are divisible by 3?

Answer: There are .....

- A 299 numbers
- B 300 numbers
- C 899 numbers
- D 900 numbers

**EXAM 3**

**Grid Ins**

Fill in the blanks with the correct answers to answer 10 questions below.



Question 1.  $\frac{72}{100} = \dots\dots\dots\%$

Question 2. Convert: 7m 5cm = ..... cm.

Question 3. Calculate:  $2.5 \times 3 + 7.35$ .

The result is .....

Question 4. The value of 2 in 12.0935 is .....

Question 5. If  $\overline{ab} \times 1.01 = \overline{a5.6b}$  then  $a + b = \dots\dots\dots$

Question 6. Each letter A or B represent a single digit number such that:

$$\begin{array}{r} AB \\ + AB \\ \hline AB \\ 16B \end{array}$$

Find B.

Answer: The value of B is .....

Question 7. Peter, Jack and Tom shared 176 marbles in the ratio 4 : 8 : 10. How many more marbles did Tom receive than Peter?

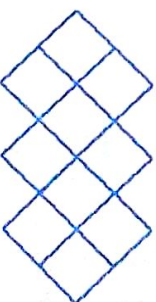
Answer: There are ..... marbles.

Question 8. 29% of x is 377. The value of x is .....

Question 9. Find x if  $(x + 1) + (x + 6) + (x + 11) + \dots + (x + 96) = 990$ .

Answer: x = .....

Question 10. How many squares are there in the following figure?



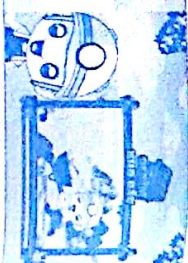
Answer: There are ..... squares.

# ROUND 8

## TEST 1

### EXAM 1 Treasure Hunting

Let's help the miner to go through the maze by answering 10 questions to reach the destination.



**Question 1.** Fill in the blank with the correct number.

Calculate:  $8.1 + 4.5 + 3.9 + 2.5$ .

The result is .....

**Question 2.** Fill in the blank with the correct number.

12% of what is 36?

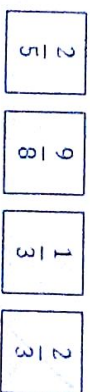
Answer: 12% of ..... is 36.

**Question 3.** Fill in the blank with the correct number.

The difference between 49.8km and 93.7km is .....m.

**Question 4.** Choose the correct answer.

Write the following fractions in order from least to greatest.



Answer: The correct order is .....

**A**  $\frac{2}{5}, \frac{1}{3}, \frac{2}{9}, \frac{9}{8}$

**C**  $\frac{1}{3}, \frac{2}{9}, \frac{2}{5}, \frac{9}{8}$

**B**  $\frac{9}{8}, \frac{2}{9}, \frac{2}{5}, \frac{1}{3}$

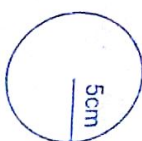
**D**  $\frac{1}{3}, \frac{2}{9}, \frac{2}{5}, \frac{9}{8}$

**Question 5.** Fill in the blank with the correct number.

If  $x$  is a natural number and  $0.5 \times x > 8.7$  then the least value of  $x$  is .....

**Question 6.** Fill in the blank with the correct number.

The area of the following circle is .....  $\text{dm}^2$ .



**Question 7.** Fill in the blank with the correct number.

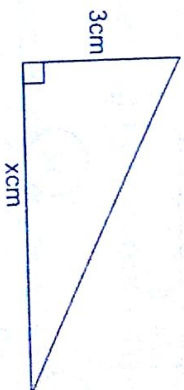


The value of  $x$  such that  $x - 12.4 = 41.4 : 4.6$  is .....

Answer: The value of  $x$  such that  $x - 12.4 = 41.4 : 4.6$  is .....

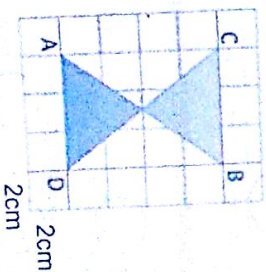
**Question 8.** Fill in the blank with the correct number.

Find  $x$  if the area of the following triangle is  $9.75\text{cm}^2$ .



Answer:  $x = \dots\dots\dots$

**Question 9.** The area of the shaded figure is .....  $\text{cm}^2$ .



**Question 10.** How many 3 - digit numbers not divisible by 3?

Answer: There are ..... numbers.

### EXAM 2

### Matching

Choose pairs of numbers or calculations have the same value in the following table's cells then fill their sequence number in  below.

60% of 80	<input type="radio"/> 1	$12.5 \times (6.3 + 3.7)$	<input type="radio"/> 2	The value of x if $39.6m^2 = xdm^2$	<input type="radio"/> 3	$\frac{5}{7} : \frac{9}{7}$	<input type="radio"/> 4
$\frac{5}{7} \times \frac{9}{7}$	<input type="radio"/> 5	$12.5 \times (6.3 - 3.7)$	<input type="radio"/> 6	$\frac{3}{7}$	<input type="radio"/> 7	$4.2 \times 2.3 + 18.34$	<input type="radio"/> 8
8% of 6	<input type="radio"/> 9	125	<input type="radio"/> 10	40% of 120	<input type="radio"/> 11	$\frac{13}{5}$	<input type="radio"/> 12
$\frac{27}{63}$	<input type="radio"/> 13	24 : 5	<input type="radio"/> 14	$\frac{5}{9}$	<input type="radio"/> 15	The sum of all 2-digit numbers not divisible by 5	<input type="radio"/> 16
$0.28 \times 100$	<input type="radio"/> 17	2.6	<input type="radio"/> 18	$1 - \frac{4}{49}$	<input type="radio"/> 19	$12.5 \times 6.3 - 12.5 \times 3.7$	<input type="radio"/> 20

Answer: Pairs of numbers or calculations have the same value are:

- and  ;  and  ;  and  ;  and
- and  ;  and  ;  and  ;  and
- and  ;  and

### EXAM 3

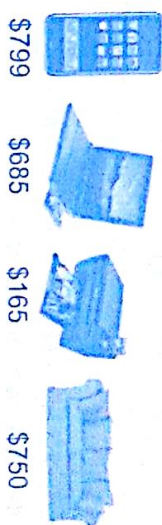
### Grid Ins

Fill in the blanks with the correct answers to answer 10 questions below.

Question 1. Calculate:  $2.3m + 6.8m = \dots\dots dm$ .

The result is .....

Question 2. How much are the iPhone and the printer altogether?



Answer: The iPhone and the printer cost \$..... altogether.

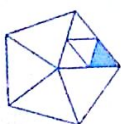
Question 3. If  $a = 3.5$  and  $b = 8.89$  then  $b : a = \dots\dots$

Question 4. Find all x such that  $2.91 < x < 11.34$  and x is a even number.

(Write numbers in order from least to greatest and use ";")

Answer: x = .....

Question 5. In the following figure, what percentage is the shaded part?



Answer: The percentage of the shaded part is .....

Question 6. Find x such that  $(x + 2.35) - 4.67 = 14.68$ .

Answer: The value of x is .....

Question 7. The perimeter of the star equals the perimeter of the regular hexagon. Each side of the hexagon is 16cm long. How long is each side of the star?

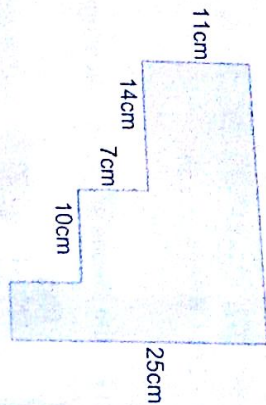


Answer: Each side of the star is ... cm long.

Question 8. Fill in the blank with the correct number.

$$2m^3 3dm^2 + 1m^3 35cm^2 = \dots\dots cm^2$$

Question 9. The area of the following figure is  $\dots\dots cm^2$ .



Question 10. Fill in the blank with the correct number.

Tina works 17 hours a week (from Monday to Friday). Last week she worked 4.5 hours on Monday; 5 hours on Tuesday; 2.2 hours on Wednesday and 1.5 hours on Thursday. She worked  $\dots\dots$  minutes on Friday.

## TEST 2

### EXAM 1 Treasure Hunting

Let's help the miner to go through the maze by answering 10 questions to reach the destination.



Question 1. Fill in the blank with the correct number.

$$\text{Calculate: } 124.7 : 100 + 34.25.$$

Answer: The result is  $\dots\dots$

Question 2. Choose the correct answer.

Look at these numbers :

5.586    0.293    0.675    5.595

Two numbers in the box have a sum of 6.261 are:

- A 5.595 and 0.675
- B 5.586 and 0.675
- C 5.586 and 0.293
- D 5.595 and 0.293

Question 3. Which of the following numbers should replace the question mark?

$$15.41 - \text{?} = 12.06 + 0.7$$

- A 4.05
- B 5.04
- C 2.56
- D 2.65

Question 4. Choose the correct answer.

Andrea has  $\frac{1}{4}$  of sack of rice. She divides the rice equally into 7 bags.

What fraction of the full sack of rice is in each bag?

Answer: The fraction of the full sack of rice in each bag is  $\dots\dots$

- A  $\frac{11}{28}$
- B  $\frac{1}{28}$
- C  $\frac{1}{7}$
- D  $\frac{1}{4}$

Question 5. Fill in the blank with the correct number:

$$2700g = \dots\dots kg.$$

Question 6. Fill in the blank with the correct number:

27 is  $\dots\dots\%$  more than 15.

Question 7. Find x if  $x \times 0.34 = 2.38 \times 3.06$ .

Answer: x =  $\dots\dots$

Question 8. Fill in the blank with the correct number:

$$3.94m + 821cm = \dots\dots cm.$$

Question 9. Fill in the blank with the correct number.

Nick spent 25% of his money on a book and \$17 on a pair of shoes. If he had \$28 left then he spent \$ $\dots\dots$  on the book.

Question 10. Fill in the blank with the correct number.

A rope 1.5m long is cut into 2 pieces. The longer piece is 26cm longer than the shorter piece. The length of the shorter piece is  $\dots\dots$  cm.

**EXAM 2**

**Matching**

Choose pairs of numbers or calculations have the same value in the following table's cells then fill their sequence number in  below.

$27.3 - (7.5 - 2.3)$	$39.95 - 2.6 - 23.25$	$6.375 \times 5$	$27.3 - 7.5 - 2.3$
<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
$7.3 \times 3 + 3.4$	$107.4 : 6$	$19.8 + 2.3$	The value of x if $39dm6cm = xcm$
<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 7	<input type="radio"/> 8
$9.29 + 2.5 + 3.17$	$15 : 8$	$3.125 \times 2 + 7.85$	The $333^{rd}$ number in the sequence: 5; 10; 15; 20;.....
<input type="radio"/> 9	<input type="radio"/> 10	<input type="radio"/> 11	<input type="radio"/> 12
The sum of all 2-digit numbers divisible by 3	$6.5 \times 3 - 1.6$	$14.515 + 17.36$	$7.5 : 2$
<input type="radio"/> 13	<input type="radio"/> 14	<input type="radio"/> 15	<input type="radio"/> 16
$19.8 - 2.3$	$7.7 + 17.6$	$3 \times 11 \times 12$	$19.16 - 4.2$
<input type="radio"/> 17	<input type="radio"/> 18	<input type="radio"/> 19	<input type="radio"/> 20

Answer: Pairs of numbers or calculations have the same value are:

- and  ;  and  ;  and  ;  and
- and  ;  and  ;  and  ;  and
- and  ;  and  ;  and  ;  and

**EXAM 3**

**Grid Ins**

Fill in the blanks with the correct answers to answer 10 questions below.



**Question 1.** A roller skate costs 50 dollars. Mary receives a 10% discount. How much does she have to pay?

Answer: She has to pay \$.....

**Question 2.** Fill in the blank with the correct number:

$2.25dam^2 \times 7 = \dots\dots m^2$ .

**Question 3.** Find x such that  $x - 12.5 = 10.75 : 2.5$ .

Answer: The value of x is .....

**Question 4.** Alex painted a fence. He completed  $\frac{3}{5}$  of the work on Monday. On Tuesday, he was tired and completed only  $\frac{1}{4}$  of the fence. The last day, on Wednesday, he painted  $\frac{A}{B}$  of the fence. Find A if B = 60.

Answer: A = .....

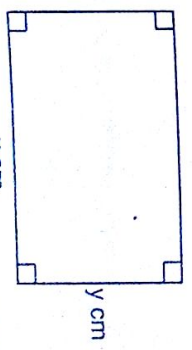
**Question 5.** Jane bought jelly beans. She gave  $\frac{9}{11}$  of them for Jack. Jane kept 36 jelly beans. How many jelly beans did she buy altogether?

Answer: Jane bought ..... jelly beans altogether.

**Question 6.** Fill in the blank with the correct number:

15% of 370kg = .....g.

**Question 7.** The perimeter of this rectangle is 210cm and the ratio of x to y is  $\frac{3}{4}$  then its area is .....dm<sup>2</sup>.





## ROUND 9

### EXAM 1 Gird Ins

Fill in the blanks with the correct answers to answer 10 questions below.



**Question 1.** Jane buy a couch. A couch costs 950 dollars. She receives a 30% discount. How much money of the discount does she get?

Answer: She gets ..... dollars discount.



**Question 2.** The perimeter of a circle is 21.98dm. Its area is .....cm<sup>2</sup>.

**Question 3.** Fill in the blank with the correct number:

$$7.625\text{m}^3 = \dots\dots\text{cm}^3.$$

**Question 4.** Fill in the blank with the correct number:

$$\frac{76}{250} \text{ dm}^3 = \dots\dots\text{cm}^3.$$

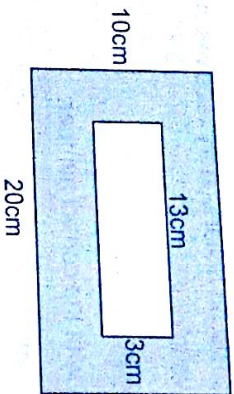
**Question 5.** The ratio of the number of girls to the number of boys in a classroom were 5 : 4. When 10 girls left the classroom, the ratio of the number of boys to the number of girls became 4 : 3. How many students were in the classroom at first?

Answer: There were ..... students in the classroom at first.

**Question 8.** Mrs. Jane bought 2kg of grapes and 3kg of apples and had to pay \$14.92. Mrs. Anna bought 6kg of apples and 5kg of grapes and had to pay \$33.13. How much does one kilogram of grapes cost?

Answer: One kilogram of grapes cost \$.....

**Question 9.** The area of the shaded region is .....cm<sup>2</sup>.



**Question 10.** Calculate:

$$2.73 + 4.23 + 5.73 + 7.23 + 8.73 + 10.23 + 11.73 + 13.23 + 14.73 + 16.23 + 17.73.$$

The result is .....

**Question 6.** An aquarium is 7dm deep, 15dm long and 0.3m wide. What is the volume of the aquarium in cubic centimeters?

Answer: The volume of the aquarium is .....cm<sup>3</sup>.

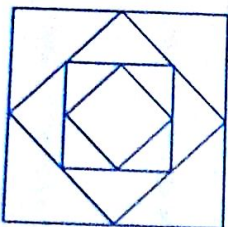


**Question 7.** The area of a rectangle is 70m<sup>2</sup>. If its length is increased by 10% and its width is decreased by 20% then the area of the new rectangle is .....m<sup>2</sup>.

**Question 8.** Anna has an average score 75 on 8 different tests. If the lowest score is removed then her average rises to 80. What is her lowest score?

Answer: Her lowest score is .....

**Question 9.** The sum of area of all squares in the following figure is 56250dm<sup>2</sup>. The area of the smallest square is .....cm<sup>2</sup>.



**Question 10.** At a party 60% of the boys are dancing with 90% of the girls. How many people are dancing if there are 50 people? (A pair includes only one boy and one girl).

Answer: There are ... people.



**EXAM 2 Golden Frog**

Choose the correct answer in 4 available answers.



**Question 1.** Which fraction is equal to 17.5%?

The correct answer is

- A  $\frac{175}{100}$
- B  $\frac{35}{20}$
- C  $\frac{7}{40}$
- D  $\frac{35}{50}$

**Question 2.** Mia want to buy apple. Which is the best buy?

- A 7kg of apples for \$30.38
- B 5kg of apples for \$21.5
- C 6kg of apples for \$26.1
- D 4kg of apples for \$17.32

**Question 3.** Peter counts his heart rate. He counts 8 beats per 6 seconds on average. How many beats per minute does Peter count?

Answer: Peter counts ..... beats per minute.

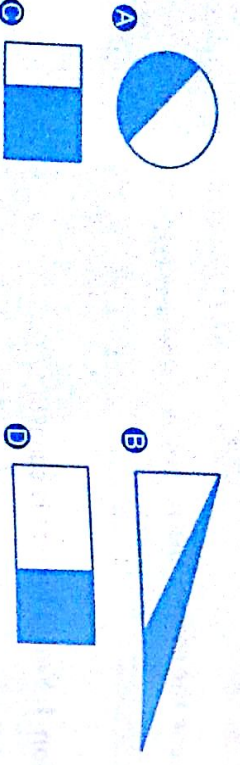


- A 80
- B 75
- C 60
- D 140

**Question 4.** Choose the calculation that has the greatest result.

- A  $196.4 : 4 - 7.07$
- B  $59.8 : 2 + 26.13$
- C  $365.5 : 5 - 17.8$
- D  $125.7 : 3 + 14.3$

Question 5. Which of the following shapes is colored more than 50%?



Question 6. If number A is increased by 60% then it will equal number B. How much percentage will B be decreased by to equal A?

- Answer: B will be decreased by ...
- A 60%
  - B 37.5%
  - C 62.5%
  - D 40%

Question 7. The product:  $20 \times 21 \times 22 \times \dots \times 40$  has ..... digit 0.

- A 5
- B 4
- C 3
- D 2

Question 8. How many fractions equal  $\frac{1}{5}$  and have denominators of 2-digit numbers?

- Answer: There are .....
- A 16 numbers
  - B 18 numbers
  - C 22 numbers
  - D 20 numbers

Question 9. Calculate:  $\frac{1}{6} + \frac{1}{12} + \frac{1}{24} + \dots + \frac{1}{768}$ .

The result is:

- A  $\frac{255}{256}$
- B  $\frac{711}{768}$
- C  $\frac{85}{256}$
- D  $\frac{767}{768}$

Question 10. Find the smallest number that is 7 times the sum of its digits?

- Answer: This number is .....
- A 14
  - B 28
  - C 42
  - D 21

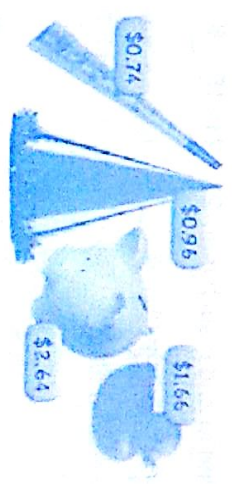
**EXAM 3** Jump Over

You have to drive your car passing 10 obstacles to finish. In order to overcome each obstacle, you have to answer correctly one question in that obstacle. Are you ready?



Question 1. How much money would you need to buy the two most expensive toys?

Answer: \$.....



Question 2. Calculate:  $5.5 \times (3.5 - 1.5) + 1.5$ .

The result is .....

Question 3. Find x such that  $x \times 8.6 - 5.2 \times x - 11.06 = 5.94$ .

Question 4. Jim Smith drinks a magic potion that reduces his weight by half. He was 135kg before, so how heavy is he now?

Answer: He is .....kg now.

Question 5. Bill has \$40 in a saving account. The interest rate is 5% per month (interest on this month is not added to capital for the next month). How much will Bill have in one year (both capital and interest)?

Answer: He has \$..... in one year.

Question 6. Calculate:  $\frac{1}{5} + \frac{7}{11} + \frac{5}{13} + 4 \times \left( \frac{1}{5} + \frac{1}{11} \right) + \frac{21}{13}$ .

The result is .....

Question 7. Find the smallest sum of two numbers if their product is 100.

Answer: The sum is .....

**Question 8.** Find the smallest 6-digit number where only two digits are the same?

Answer: This number is .....

**Question 9.** The perimeter of the shape is ..... cm.



**Question 10.** Find m and n such that  $23 \times 24 \times 15 \times 16 \times m = \overline{9n7360}$ .

Answer: The value of m is .....

The value of n is .....

## ROUND 10

### EXAM 1 Golden Frog

Choose the correct answer in 4 available answers.



**Question 1.** 15% of 1080kg = .....g.

Choose the correct number fill in the blank.

- A 162       B 7200       C 162000       D 7200000

**Question 2.** Calculate:  $3.54 + 1.12 + 0.98 + 2.3$ .

The result is .....

- A 7.94       B 5.36       C 6.74       D 7.49

**Question 3.** Find the smallest number that the sum of its digits is 15.

Answer: This number is .....

- A 159       B 69       C 168       D 177

**Question 4.** Find x such that  $x \times 3 \frac{1}{15} - \frac{7}{9} = 2 \frac{1}{3}$ .

The value of x is:

- A  $\frac{1288}{135}$        B  $\frac{3864}{405}$        C  $\frac{1}{69}$        D  $1 \frac{1}{135}$

**Question 5.** Now, Peter's father is 36 years old and he is 11 years old. .... years ago, Peter's father was six times as old as him.

The missing number is:

- A 3       B 4       C 5       D 6

**Question 6.** If the sum of two natural numbers is 463 and there are eighteen odd numbers between these numbers then the less number is:

- A 213       B 123       C 435       D 453

**Question 7.** Find m if  $\frac{1}{4} < \frac{m+2}{15} < \frac{17}{60}$ .

Answer: m = .....

- A 2       B 14       C 4       D 16

**Question 8.** Find y such that:

$$\left( \frac{1}{2 \times 4} + \frac{1}{4 \times 6} + \frac{1}{6 \times 8} + \dots + \frac{1}{98 \times 100} \right) : y = \frac{147}{50}$$

Answer: The value of y is

- A  $\frac{1}{2}$        B  $\frac{1}{3}$        C  $\frac{1}{4}$        D  $\frac{1}{12}$

**Question 9.** The surface area of a cube is  $864 \text{ cm}^2$ . The volume of this cube is .....

- A  $1258 \text{ cm}^3$        B  $4291 \text{ cm}^3$        C  $1728 \text{ cm}^3$        D  $3456 \text{ cm}^3$

**Question 10.** Find the last digit of  $A = 11 \times 21 \times 31 \times \dots \times 71 + 9 \times 19 \times 29 \times \dots \times 89$ .

Answer: The last digit of A is .....

- A 4       B 3       C 2       D 0

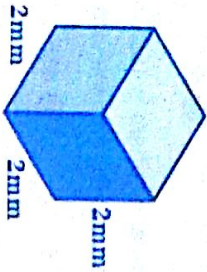
**EXAM 2** Grid Ins

Fill in the blanks with the correct answers to answer 10 questions below.



Question 1. If  $\frac{144}{17} \times \frac{34}{12} < n < \frac{169}{34}$ ;  $\frac{13}{68}$  and  $n$  is a natural number then  $n = \dots$

Question 2. What is the volume of this cube in  $\text{cm}^3$ ?



Answer: The volume of this cube is  $\dots \text{cm}^3$ .

Question 3. Find  $x$  if  $x$  is a natural number and  $0.6 \times 7.5 < x < 3.5 \times 1.6$ .

Answer:  $x = \dots$

Question 4. Fill in the blank with the correct number

$$34\text{m}^2 \cdot 27\text{cm}^2 + 27\text{m}^2 \cdot 20\text{dm}^2 = \dots \text{dm}^2.$$

Question 5. Bella ate lunch at a restaurant. The total cost of her lunch is \$55. She left a 10% tip. What was her bill for lunch?

Answer: Bella's bill was \$.....

Question 6. How many 2-digit numbers have a sum of the digits equal 12?

Answer: There are ..... such numbers.

Question 7. The sum of four consecutive natural number is 954. Find the greatest number.

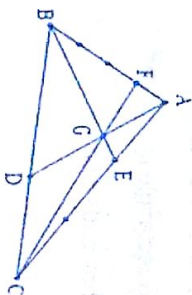
Answer: The greatest number is .....

Question 8. Find  $n$  such that:

$$\frac{2}{3} + \frac{2}{15} + \frac{2}{35} + \dots + \frac{2}{n} = \frac{322}{323}.$$

Answer:  $n = \dots$

Question 9. Look at the following figure:  $\frac{FA}{BA} = \frac{1}{4}$ ;  $\frac{EA}{CA} = \frac{1}{3}$ . If the area of triangle GBD is  $270\text{m}^2$  then the area of the triangle GCD is  $\dots \text{m}^2$ .



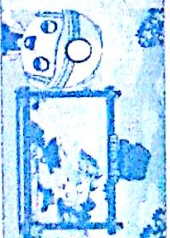
Question 10. Find  $K$  such that:

$$K - 2016 = \frac{1 + (1+2) + (1+2+3) + \dots + (1+2+3 + \dots + 2017)}{2017 \times 1 + 2016 \times 2 + 2015 \times 3 + \dots + 2 \times 2016 + 1 \times 2017}$$

Answer:  $K = \dots$

**EXAM 3** Treasure Hunting

Let's help the miner to go through the maze by answering 10 questions to reach the destination.



Question 1. Find  $m$  if  $m$  is a natural number and  $m \times 2 + 1 < 1.28 \times 4 < 3 \times m$ .

Answer:  $m = \dots$

Question 2. If  $x$  is a natural number and  $\frac{4728}{100} < x$  then the least value of  $x$  is .....

Question 3. Peter wrote consecutive numbers from 8 to 723. How many digits did he write?

Answer: There were ..... digits.

# PART II. ANSWER

## ROUND 1

### TEST 1

#### EXAM 1.

Question	1	2	3	4	5	6	7	8	9	10
Answer	A	D	B	D	C	C	B	A	C	A

#### EXAM 2.

Question	1	2	3	4	5	6	7	8	9	10
Answer	2	273; 231	$\frac{31}{4}$	>	400	38	$\frac{1}{5}$	3	9	$\frac{9}{31}$

#### EXAM 3.

14 → 19 → 9 → 20 → 8 → 1 → 17 → 18 → 6 → 15  
 → 7 → 4 → 5 → 10 → 3 → 11 → 16 → 12 → 13 → 2.

### TEST 2

#### EXAM 1.

Question	1	2	3	4	5	6	7	8	9	10
Answer	B	D	D	B	A	C	A	B	C	C

**Question 4.** The average of 4 consecutive even numbers is 123. Find the least number.  
 Answer: The least number is .....

**Question 5.** How many 4-digit numbers are divisible by 2, 3 and 5?  
 Answer: There are ..... numbers.

**Question 6.** The length of a rectangle is 7.5cm longer than its width and its perimeter is three times as long as its length. Find its area.  
 Answer: The area of the rectangle is .....cm<sup>2</sup>.

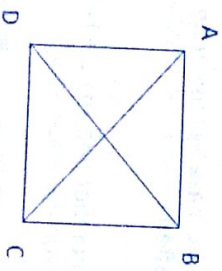
**Question 7.** Find  $\overline{abcd}$  such that  $\overline{dad} = \overline{abc} \times 5$ .  
 Answer:  $\overline{abcd} = \dots\dots$

**Question 8.** The average of three numbers is 32. The second number is two times the first number and the third number is six units more than the second number. Find the first number.  
 Answer: The first number is .....

**Question 9.** Calculate:  $\frac{1}{1+2} + \frac{1}{1+2+3} + \frac{1}{1+2+3+4} + \dots\dots + \frac{1}{1+2+3+\dots\dots+100}$ .

Answer: The result is .....

**Question 10.** Find the area of the square ABCD if the sum of area of all triangle in the figure is 1704cm<sup>2</sup>.



Answer: The area of the square ABCD is .....cm<sup>2</sup>.

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	$\frac{4}{5}$	24	$\frac{75}{100}$	10	$\frac{1 \cdot 3 \cdot 4 \cdot 10 \cdot 8}{2 \cdot 5 \cdot 5 \cdot 9 \cdot 7}$	2	=	14	360	1

**EXAM 3.**

13 → 6 → 4 → 16 → 19 → 15 → 1 → 18 → 8 → 10  
 → 2 → 9 → 12 → 7 → 14 → 20 → 11 → 5 → 17 → 3.

**ROUND 2****TEST 1****EXAM 1.**

1 and 12; 2 and 11; 3 and 8; 4 and 17; 5 and 18;  
 6 and 14; 7 and 20; 9 and 19; 10 and 15; 13 and 16.

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	60	$\frac{3}{7}$	5005	$\frac{23 \cdot 27}{21 \cdot 24}$	325	37	$\frac{12}{15}$	-	10059	$\frac{101}{3}$

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	$\frac{19}{42}$	<	$\frac{29}{21}$	50	12	1495	6300	$\frac{97}{198}$	5	4

**TEST 2****EXAM 1.**

1 and 12; 2 and 19; 3 and 16; 4 and 14; 5 and 18;  
 6 and 17; 7 and 13; 8 and 9; 10 and 15; 11 and 20.

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	$\frac{7}{45}$	C	D	$\frac{22}{3}$	$\frac{2}{35}$	21000	$\frac{13}{10}$	$\frac{270}{250}$	103	30

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	$\frac{31}{6}$	48	$\frac{3}{5}$	×	$\frac{56}{15}$	39	3075	14	$\frac{4}{6}$	=

**ROUND 3****TEST 1****EXAM 1.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	$\frac{79}{20}$	$\frac{11}{15}$	$\frac{1}{2}$	39	$\frac{1008}{1007}$	334	5	$\frac{318}{320}$ ; 322	4	42857

**EXAM 2.**

6 → 13 → 4 → 7 → 18 → 12 → 19 → 10 → 1 → 15  
 → 9 → 20 → 2 → 17 → 11 → 3 → 16 → 5 → 8 → 14.

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	B	D	A	C	B	A	C	A	D	D

**TEST 2**

**EXAM 1.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	$\frac{26}{5}$	60	$\frac{47}{15}$	28	$\frac{17}{35}$	=	10	6	5	12

**EXAM 2.**

1 → 12 → 13 → 19 → 4 → 11 → 5 → 10 → 20 → 2  
 → 17 → 7 → 18 → 9 → 15 → 6 → 16 → 3 → 14 → 8.

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	B	D	D	C	C	A	A	B	D	C

**ROUND 4**

**TEST 1**

**EXAM 1.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	B	C	B	D	A	D	A	D	A	A

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	7	5	3.04	3.24	7.99	2.5357	42:30	20	0.1234	8

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	5	>	3.45; 4.06; 4.6; 5.03; 5.3	4.35	37.254	40.57	22.1	3	=	3.4

**TEST 2**

**EXAM 1.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	A	C	B	B	C	D	B	B	A	B



**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	5	4.015	29.14	<	11.41	4.53	22.248	23 : 24	6.7	8

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	1	=	7.02	7.025	>	13.091	125.78	>	3	10:12

**ROUND 5****TEST 1****EXAM 1.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	A	B	D	C	B	D	C	A	C	C

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	34.373	12.7	27.79	27.405	2.7	<	4.3	8	6	3.6

**EXAM 3.**

12 → 17 → 6 → 4 → 19 → 9 → 11 → 14 → 1 → 16  
 → 7 → 20 → 13 → 3 → 18 → 8 → 2 → 15 → 5 → 10.

**TEST 2****EXAM 1.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	B	B	A	C	D	C	A	D	B	C

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	118.2	7.8	93	10.12	27.45	17.25	5.46	5	29.64	121.5

**EXAM 3.**

2 → 17 → 12 → 9 → 14 → 7 → 19 → 16 → 4 → 3  
 → 20 → 6 → 18 → 8 → 10 → 11 → 1 → 13 → 15 → 5.

**ROUND 6****TEST 1****EXAM 1:**

7 and 10 ; 19 and 4 ; 13 and 12 ; 5 and 20 ; 15 and 2 ;  
 17 and 8 ; 18 and 3 ; 16 and 6 ; 9 and 14 ; 1 and 11.

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	B	D	A	B	D	8	C	16	50	C

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	0.9	38.5	3.9	3.5	75	8.1	1	0.5	2.5	125

**TEST 2**

**EXAM 1.**

15 and 9 ; 2 and 8 ; 17 and 10 ; 3 and 18 ; 6 and 20 ;  
1 and 7 ; 12 and 13 ; 19 and 5 ; 11 and 4 ; 14 and 16.

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	A	D	A	B	16	A	12	C	50	B

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	0.756	150	3.75	36.5	68	10.5	2	0.625	8	2

**ROUND 7**

**TEST 1**

**EXAM 1.**

10 → 15 → 17 → 3 → 6 → 19 → 8 → 9 → 1 → 12  
→ 14 → 7 → 20 → 2 → 16 → 11 → 4 → 18 → 13 → 5.

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	D	B	C	A	D	B	B	A	B	C

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	57	40	0.1375	39	118	7.175	0.4	8	36	44

**TEST 2**

**EXAM 1.**

18 → 7 → 12 → 15 → 5 → 10 → 20 → 13 → 2 → 4  
→ 9 → 3 → 19 → 11 → 17 → 16 → 8 → 1 → 14 → 6.

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	C	D	B	D	C	A	B	C	C	B

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	72	705	14.85	2	11	5	48	1300	1	13

**ROUND 8**

**TEST 1**

**EXAM 1.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	19	300	43900	C	18	0.785	21.4	6.5	24	600

**EXAM 2.**

7 and 13 ; 18 and 12 ; 15 and 4 ; 5 and 19 ; 2 and 10 ;  
20 and 6 ; 1 and 11 ; 9 and 14 ; 8 and 17 ; 3 and 16.

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	91	964	2.54	4 : 6 ; 8 : 10	5	17	9.6	30335	484	228

**TEST 2**

**EXAM 1.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	35,497	B	D	B	2.7	80	21.42	1215	15	62

**EXAM 2.**

10 and 16 ; 17 and 4 ; 1 and 7 ; 19 and 8 ; 9 and 20 ;  
5 and 18 ; 11 and 2 ; 3 and 15 ; 6 and 14 ; 13 and 12.

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	45	1575	16.8	9	198	55500	27	3.29	161	112.53

**ROUND 9**

**EXAM 1.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	285	3846.5	7625000	304	45	315000	61.6	40	375000	36

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	C	B	A	D	C	B	A	B	C	D

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	4.3	12.5	5	67.5	64	4	20	100234	80	7 : 2

**ROUND 10**

**EXAM 1.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	C	A	B	C	D	A	A	D	C	D

**EXAM 2.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	25	0.008	5	6120.27	50	7	240	103683	180	2017

**EXAM 3.**

Question	1	2	3	4	5	6	7	8	9	10
Answer	2	48	2054	120	300	112.5	1035	18	$\frac{99}{101}$	568

## TABLE OF CONTENTS

Preface .....	3
Instructions for using Grade 5 book .....	5
<b>Part I. PRACTICAL TESTS</b> .....	9
<b>Round 1</b> .....	9
Test 1 .....	9
Test 2 .....	14
<b>Round 2</b> .....	19
Test 1 .....	19
Test 2 .....	23
<b>Round 3</b> .....	27
Test 1 .....	27
Test 2 .....	32
<b>Round 4</b> .....	37
Test 1 .....	37
Test 2 .....	41
<b>Round 5</b> .....	45
Test 1 .....	45
Test 2 .....	49
<b>Round 6</b> .....	53
Test 1 .....	53
Test 2 .....	58
<b>Round 7</b> .....	63
Test 1 .....	63
Test 2 .....	68
<b>Round 8</b> .....	72
Test 1 .....	72
Test 2 .....	76
<b>Round 9</b> .....	81
<b>Round 10</b> .....	86
<b>Part II. ANSWER</b> .....	91

*Chịu trách nhiệm xuất bản:*

Chủ tịch Hội đồng Thành viên MẠC VĂN THIÊN

Tổng Giám đốc kiêm Tổng biên tập GS.TS. VŨ VĂN HÙNG

*Tổ chức bản thảo và chịu trách nhiệm nội dung:*

Phó Tổng biên tập PHAN ĐOÀN THOẠI

Giám đốc Công ty CP Sách dân tộc HÀ THỊ HẠI YẾN

*Biên tập nội dung và sửa bản in:*

DANG VĂN TUYẾN

LÝ TUYẾT NHUNG

*Biên tập mỹ thuật:*

DANG HỒNG QUÂN

*Trình bày bìa:*

LUONG QUOC HIẾP

*Thiết kế sách và chế bản:*

HOANG MINH