360 OF THE TOUGHEST PRACTICE QUESTIONS AVAILABLE

ADVANCED IQ TESTS

The toughest practice questions to test your lateral thinking, problem solving and reasoning skills

PHILIP CARTER

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London and Philadelphia

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Contents

	Introduction	1
1	IQ Test One	5
2	IQ Test Two	15
3	IQ Test Three	27
4	IQ Test Four	39
5	IQ Test Five	49
6	IQ Test Six	61
7	IQ Test Seven	73
8	IQ Test Eight	85
9	IQ Test Nine	97
10	IQ Test Ten	109
11	IQ Test Eleven	121
12	IQ Test Twelve	133
	Answers, Explanations and Assessment	145

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Introduction

In several of my earlier Kogan Page titles I have provided readers with the opportunity to obtain a greater understanding of IQ testing by means of practice tests in which readers have been able to familiarize themselves with the type of questions they are likely to encounter when taking such tests.

In this book I have retained some of the question types that have appeared in my previous books but have also introduced several new types of questions designed to measure an advanced level of numerical, verbal and spatial ability, as well as questions involving the use of logical analysis, lateral thinking and problem-solving abilities. The object of this book, therefore, is to present readers with an even greater challenge in which the 12 separate tests have a higher than usual overall degree of difficulty.

Such tests are particularly useful to anyone who may need to undertake graduate and managerial selection in the future. They are also of value to any professional who contemplates seeking other positions which may involve the use of psychometric testing as part of the selection process, or as a means of internal advancement in the organization in which they are employed.

The book will also appeal to people wishing to test themselves on more challenging questions by moving on from the standard-level IQ tests of previous books. These readers, who have already familiarized themselves with the type of IQ tests

contained in my previous books, will now be ready to move on to a greater challenge.

As with athletes who push out the boundary of their abilities by the use of even more rigorous training schedules and refinement of techniques, an increase in brainpower can be achieved by taking on greater mental tasks and challenges. A further advantage to be gained from tackling the more advanced questions is that readers will automatically improve their performance on standard IQ test questions.

Because they have been newly compiled for this book, the tests that follow have not been standardized, so an actual IQ rating cannot be given. However, there is a guide to performance at the end of each test, and there is also a cumulative guide for your overall performance on all 12 tests. The performance assessment is particularly useful to users of this book as the feedback provided will give them the opportunity to identify their own strengths and weaknesses. This will enable readers to build on their strengths and work at improving their performance in areas of weakness.

Each test consists of 30 questions. The tests are all multidisciplinary, which provides the opportunity to practise on the range of questions you are likely to encounter in actual IQ tests.

A time limit of 120 minutes is allowed for each test. Answers and explanations, where necessary, are provided and you should award yourself one point for each completely correct answer.

The use of a calculator is not permitted in respect of the numerical questions, which are designed to test your aptitude when working with numbers as well as your powers of mental arithmetic.

Aspects of IQ testing

Of the different methods that purport to measure intelligence, the most famous is the IQ (Intelligence Quotient) test, which is a

standardized test designed to measure human intelligence as distinct from attainments. Usually IQ tests consist of a graded series of tasks, each of which has been standardized with a large representative population of individuals in order to establish an average IQ of 100 for each test.

There are a number of different types of intelligence tests, for example Cattell, Stanford-Binet and Weschler, and each has its own different scale of intelligence.

It is generally accepted that a person's mental age remains constant in development to about the age of 13, after which it is shown to slow up, and beyond the age of 18 little or no improvement is found.

When the IQ of a child is measured the subject attempts an IQ test that has been standardized, with an average score recorded for each age group. Thus a 10-year-old child who scored the result that would be expected of a 12-year old would have an IQ of 120, or $(12 \div 10) \times 100$. Because after the age of 18 little or no improvement is found, adults have to be judged on an IQ test whose average score is 100 and the results graded above and below this norm according to known test scores.

Although it is generally accepted that it is not possible, in adulthood, to increase your actual IQ, it is possible, paradoxically, to improve your performance on IQ tests by practising on the various types of question, and learning to recognize the recurring themes. By constant practice on different IQ tests, and by getting your mind attuned to the different types of question you may encounter, it is possible to improve your IQ rating by several percentage points.

It should be pointed out that while IQ tests measure a variety of different types of ability such as verbal, mathematical, spatial and reasoning skills, it is now becoming increasingly recognized that there are many different types of intelligence and that a high measured IQ, although desirable, is not the only key to success in life. Other characteristics such as outstanding artistic, creative or

practical prowess, especially if combined with personal characteristics such as ambition, good temperament and compassion, could result in an outstanding level of success despite a low measured IQ.

Nevertheless, during the past 25–30 years IQ testing, in tandem with personality profile testing, has been brought into widespread use by employers because of the need to ensure they place the right people in the right job at the outset. One of the main reasons for this is the high cost of errors in today's world of tight budgets and reduced profit margins. To recruit a new member of staff an employer has to advertise, consider each application, reduce the applicants to a shortlist, interview and then train the successful applicant. If the wrong hiring choice has been made, the whole expensive process has to be repeated.

Although it is IQ tests which we are specifically concerned with in this book, it should be pointed out that IQ tests are just one part of what is generally referred to as psychometric testing. Such test content may be addressed to almost any aspect of our intellectual or emotional make-up, including personality, attitude, intelligence or emotion.

Psychometric tests are basically tools used for measuring the mind: the word 'metric' means *measure* and the word 'psycho' means *mind*. There are two types of psychometric tests that are usually used in tandem by employers. These are aptitude tests which assess your abilities, and personality questionnaires which assess your character and personality.

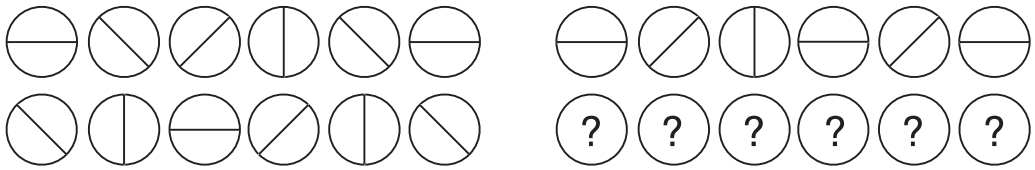
Aptitude tests are also known as cognitive, ability or intelligence (IQ) tests. Such tests are designed to test your ability to comprehend quickly under strictly timed conditions. Cognition may be broadly defined as knowing, perceiving and thinking, and it is studied by psychologists because it reveals the extent of a person's ability to think.

1

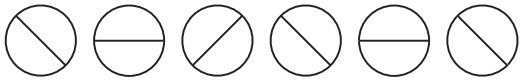
IQ Test One

Circle the answer(s), or write in the answer box provided.

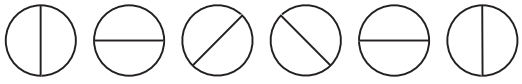
1.

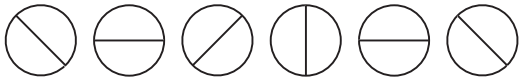


Which set of symbols should replace the question marks?

A 

B

C 

D 

E

2. Select two words that are synonyms, plus an antonym of these two synonyms, from the list of words below.

   choke, force, thrive, toil, wither, burgeon, strive

3. 19, 20, 21, ?, ?, 26, 28, 32, 33, 40

   Which two numbers should replace the question marks?

   Answer

4. The institution houses collections of objects of artistic, historic and scientific interest, and displayed for the edification and enjoyment of the public.

   One word has been removed from the passage above. Select that word from the choice below and reinstate it into its correct place in the passage.

   a. huge b. permanent c. produced d. conserved e. priceless f. accumulated

5. Which is the odd one out?

   congregation, dispersion, compilation, convocation, aggregation

6. Ω # – Ω Ω # # – ? Ω # – Ω Ω # # – = # Ω #

   – Ω Ω # # – ? Ω # – Ω Ω # # – = # Ω # – Ω

   Ω # # – ? Ω # – Ω Ω # # – Ω # – Ω Ω # # – ?

   Ω # – Ω Ω # # – = #

   Which two symbols are missing?

   a. Ω # b. – Ω c. # # d. = # e. – =

7. Which number is the odd one out?

   84129, 32418, 47632, 36119, 67626, 72927

8. Identify two words (one from each set of brackets) that form a connection (analogy), thereby relating to the words in capitals in the same way.

   CAT (lash, parade, feline, whiskers)

   SLEEP (somnambulate, night, bed, Morpheus)

9. Which word in brackets is closest in meaning to the word in capitals?

   FLIPPANT (obverse, irreverent, feeble, candid, facile)

10.

	12593	is to	35291
and	29684	is to	46982
therefore	72936	is to	?

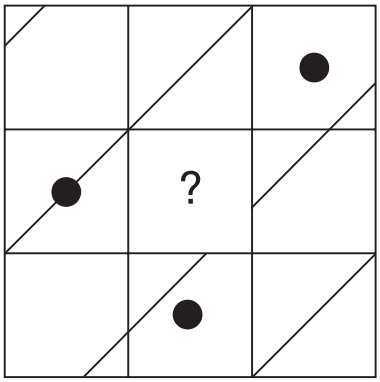
Answer ☐

11. $\frac{99}{?} = 24.75 \times 2^4$

    Complete the equation by correctly identifying the missing part of the calculation from the list of options below.

    a. 0.75 b. 1.95 – 0.75 c. 0.5^2 d. 0.825 e. 0.25

12.



Draw the contents of the middle tile in accordance with the rules of logic already established.

13. Insert numbers into the remaining blank squares so that the sums in each line and column are correct. All numbers to be inserted are less than 10.

	÷		×		=	6
+		−		×		+
	+		−	4	=	
÷		+		−		÷
	×	3	−		=	
=		=		=		=
	÷		+		=	

14. Identify a pair of anagrams from the list of words below.

intercom, carolean, fornical, landrace, alderman, maladies, parlance, calendar, marlined, miracles, minerals, confined, barnacle

15. A Z B Y D W G T ? ?

Which two letters come next? Answer

16.

14	27	56	18	76	32		68	64	71	19	25	49
5	9	11	9	13	5		?	?	?	?	?	?

The top set of six numbers has a relationship to the set of six numbers below. The two sets of six boxes on the left have the same relationship as the two sets of six boxes on the right. Which set of numbers should therefore replace the question marks?

A	14	4	8	8	5	7
B	16	9	4	10	3	13
C	12	9	4	18	6	19
D	12	10	9	8	5	7
E	14	10	8	10	7	13

17. How many cases do you need if you have to pack 112 pairs of shoes into cases that each hold 28 shoes?

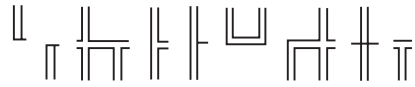
Answer

18. Which is the odd one out?

A

B

C

D 

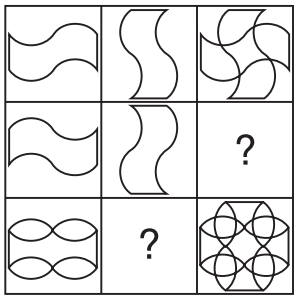
E

19. In the two numerical sequences below, one number that appears in the top sequence should appear in the bottom sequence and vice versa. Which two numbers should be changed round?

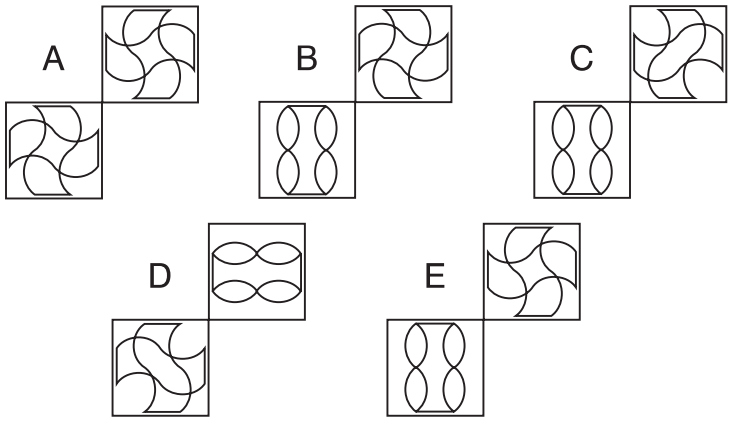
    2, 2.5, 4.5, 6.75

    1, 3, 6.25, 15.625

20.



Which two squares are missing?



21. Identify two words (one from each set of brackets) that form a connection (analogy), thereby relating to the words in capitals in the same way.

    FRONT (inverse, ulterior, anterior, contraverse, obverse)

    FACE (exterior, converse, countenance, obverse)

22. Change the position of four words only in the sentence below in order for it to make complete sense.

    If you are printing on glossy paper or transparencies, place a support stack, or a sheet of plain media, beneath the sheet, or load only one sheet at a time.

23. $? + (350 \times 0.84) = (620 \times 0.55) - \frac{\sqrt{1764}}{2}$

    Complete the equation by correctly identifying the missing part of the calculation from the list of options below.

    a. 13.5×2 b. $\frac{234}{9} + 1$ c. $3^3 + 1$ d. $\frac{120 \times 65\%}{3}$ e. $\frac{61}{17} \times 2^2$

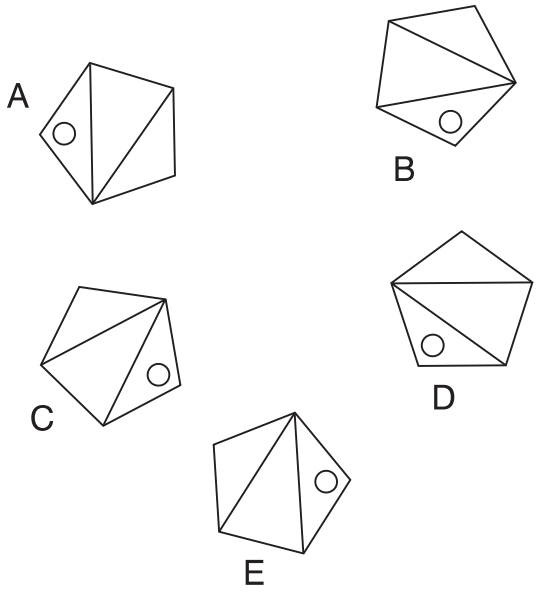
24. Which two words are most opposite in meaning?

    acquired, derivative, archetypal, elaborate, enigmatic, spasmodic

25. Select two words that are synonyms, plus an antonym of these two synonyms, from the list of words below.

    excuse, regulate, bestow, condone, concede, condemn, incarcerate

26. Which is the odd one out?



27. If 4 apples and 6 bananas cost £1.56 and 9 apples and 7 bananas cost £2.60, what is the cost of one apple and one banana?

Answer

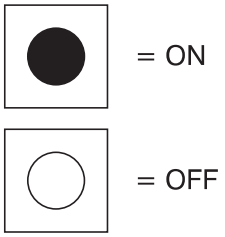
28. An electrical circuit wiring a set of four lights depends on a system of switches A, B, C and D. Each switch when working has the following effect on the lights:

Switch A turns lights 1 and 2 on/off or off/on

Switch B turns lights 2 and 4 on/off or off/on

Switch C turns lights 1 and 3 on/off or off/on

Switch D turns lights 3 and 4 on/off or off/on



In the following, switches C B D A are thrown in turn, with the result that Figure 1 is transformed into Figure 2. One of the switches is therefore not working and has had no effect on the numbered lights.

Identify which one of the switches is not working.

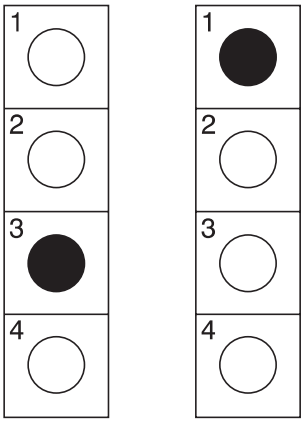
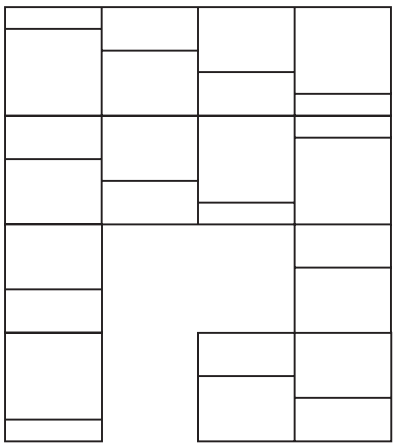
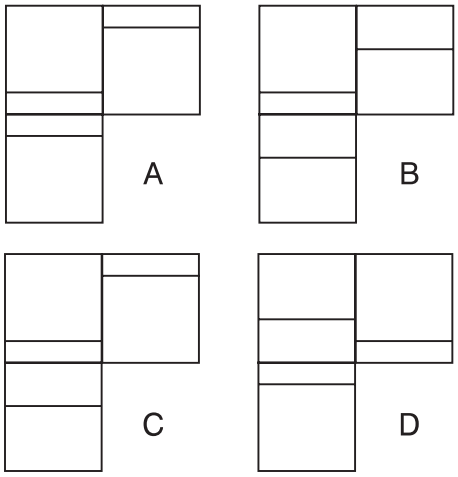


Figure 1 Figure 2

29.



Which is the missing section?



30. _____ _____ is used for a _____ variety of _____, including the _____ of _____ data for oil and _____ _____, the _____ of new _____ designs, the processing of _____ _____, and the _____ of data from _____ _____.

Insert the 15 words below into their correct position in the above passage.

analysis, analysis, applications, data, experiments, exploration, imagery, mineral, processing, processing, product, satellite, seismic, scientific, wide

2

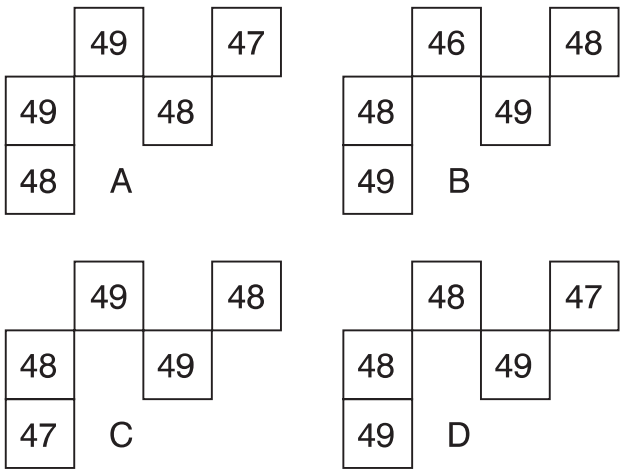
IQ Test Two

Circle the answer(s), or write in the answer box provided.

1.

50	51	49	52	48
46	47	45	48	44
49	50		51	
47		46		45
48		47	50	46

Which is the missing section?



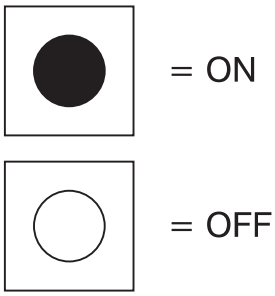
2. An electrical circuit wiring a set of four lights depends on a system of switches A, B, C and D. Each switch when working has the following effect on the lights:

   Switch A turns lights 1 and 2 on/off or off/on

   Switch B turns lights 2 and 4 on/off or off/on

   Switch C turns lights 1 and 3 on/off or off/on

   Switch D turns lights 3 and 4 on/off or off/on



   In the following, switches B C A D are thrown in turn, with the result that Figure 1 is transformed into Figure 2. One of the switches is therefore not working and has had no effect on the numbered lights.

   Identify which one of the switches is not working.

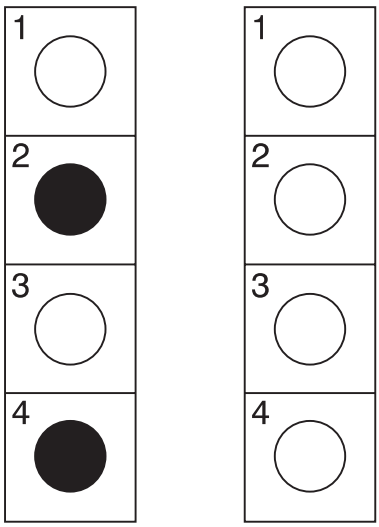


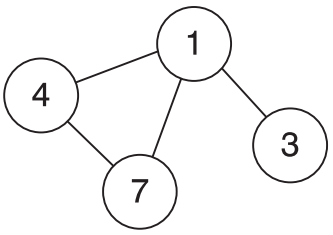
Figure 1 Figure 2

3. Starting from North, list the following compass points in the correct order working anti-clockwise.

   ENE WSW SE SSW WNW NNE SSE ESE

---

4. Insert the numbers listed into the circles so that – for any particular circle – the sum of the numbers in the circles connected to it equals the value corresponding to that circled number in the list. For example:

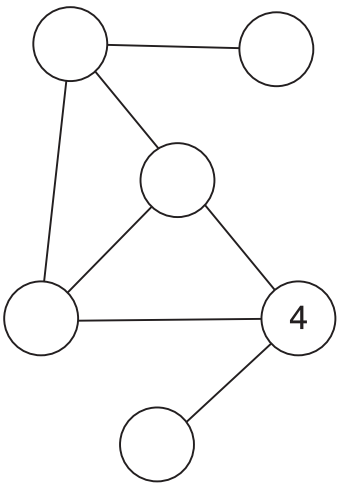


1 = 14 (4 + 7 + 3)

3 = 1

4 = 8 (1 + 7)

7 = 5 (1 + 4)



1 = 12

2 = 4

3 = 12

4 = 8

5 = 8

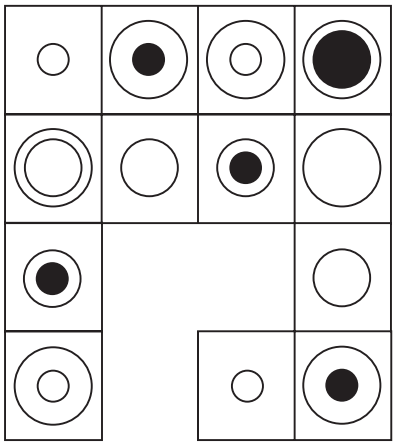
6 = 3

5. Which word in brackets is most opposite in meaning to the word in capitals?

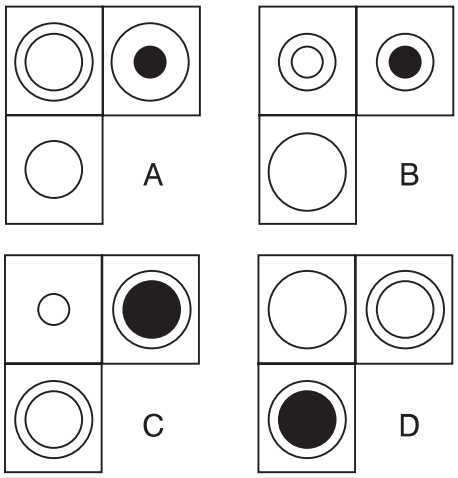
   REPLETE (open, barren, energetic, inviting, satiated)

6. Select two words that are synonyms, plus an antonym of these two synonyms, from the list of words below.

   spearhead, escort, vanguard, patrol, weapon, stern, space

7. 

   Which is the missing section?



8. Use each letter of the phrase CLEAR TRIUMPH PATTERN once only to produce the names of three musical instruments.

_____

9. In the two numerical sequences below, one number that appears in the top sequence should appear in the bottom sequence and vice versa. Which two numbers should be changed round?

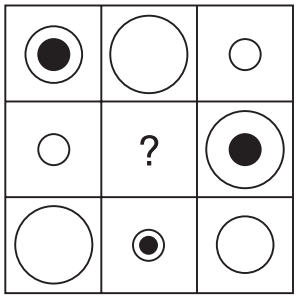
   100, 89, 76, 63, 44, 25

   105, 93, 79, 61, 45, 25

10. Which word below is out of sequence?

    manage, aplomb, fedora, manual, jumble, junior, author

11.



    Draw the contents of the middle tile in accordance with the rules of logic already established.

12. What number is, logically, missing from the sequence below?

    348269, 284315, *****, 8438, 4811, 842, 86

    Answer

13. Change the position of four words only in the sentence below in order for it to make complete sense.

    Soil rises from the material of the maple tree in the form of crude sap, a solution of sap that is absorbed from root.

14. 4, 45, 11.3, 41.3, ?, ?, 25.9, 33.9

    Which two numbers should replace the question marks?

    Answer

15. Identify two words (one from each set of brackets) that form a connection (analogy), thereby relating to the words in capitals in the same way.

    LUMBER (arm, timber, back, neck)

    TIBIAL (knee, leg, brain, drum)

16. $\frac{56 \times 3}{8} = \sqrt{49} \times ?$

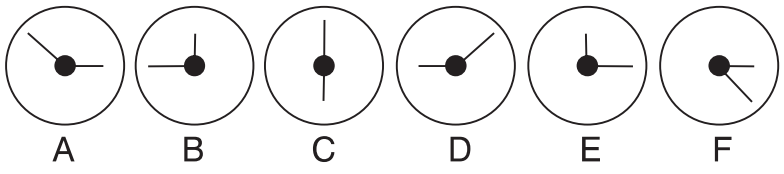
    Complete the equation by correctly identifying the missing part of the calculation from the list of options below.

    a. $\frac{276}{92}$ b. $\sqrt{16}$ c. 3.25 d. $18 - \sqrt{196}$ e. $\frac{84 - 27}{3}$

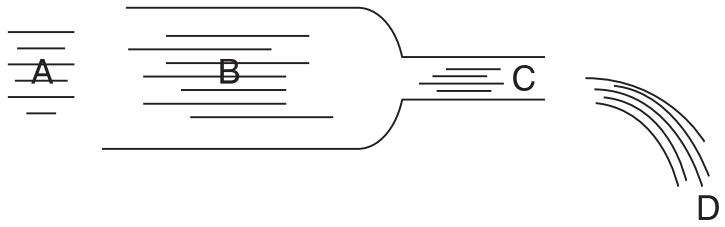
17. Select two words that are synonyms, plus an antonym of these two synonyms, from the list of words below.

    practicable, proficient, impossible, sensible, feasible, able, precise

18. Which does not belong in this sequence?



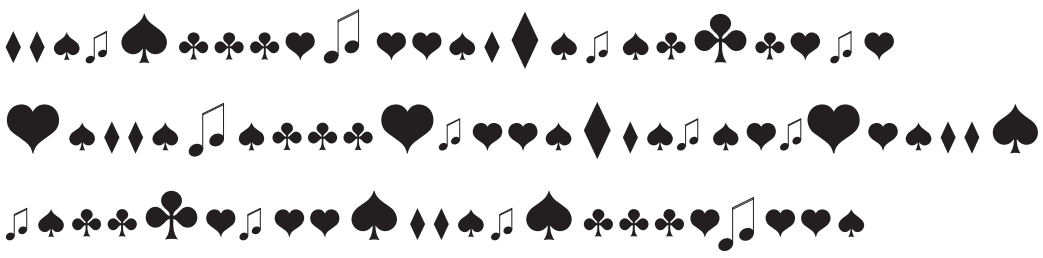
19.



A large volume of water is gushing through a pipe which narrows at the outlet. At which point, A, B, C or D will the water flow fastest?

Answer

20.



Which three symbols are missing?

A

B

C

D

E

21. A B C D E F G H

What letter comes two to the right of the letter which is immediately to the left of the letter that comes three to the right of the letter that comes midway between the letter two to the left of the letter C and the letter immediately to the right of the letter F?

Answer

22. $\frac{46}{2.5} \times 5 = \frac{?}{0.125}$

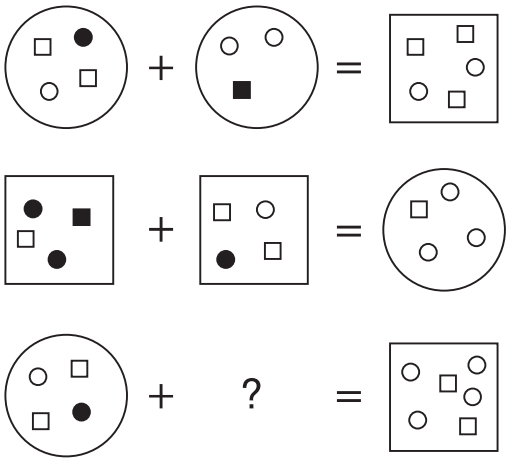
Complete the equation by correctly identifying the missing part of the calculation from the list of options below.

a. 5.75×2 b. 11.75 c. $2.25^2 \times 2$ d. 2.75×4
e. $15.75 - 3$

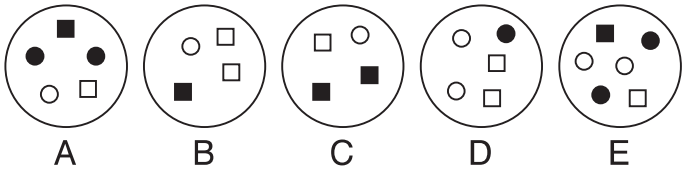
23. Which two words are closest in meaning?

Secure, masticate, allow, gnaw, twist, mete

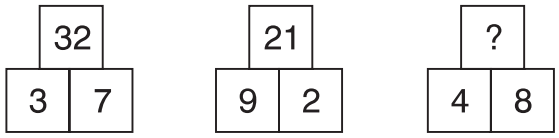
24.



Which circle below should replace the question mark?



25.



What number should replace the question mark?

Answer

26. What is: $6\frac{1}{4} \div 3\frac{3}{8}$?

Answer

27. It is a largely agricultural country of varied scenery from moorland, loughs and islands to the beautiful coastline around West Bay.

    One word has been removed from the passage above. Select that word from the choice below and reinstate it into its correct place in the passage.

    a. landlocked b. eastern c. diverse d. cold e. oceanic f. bleak

28. Each set of nine numbers relates to the other in a certain way. Work out the logic behind the numbers in the left-hand box in order to determine which number is missing from the right-hand box.

3	7	2		6	7	1
1	5	4		3	?	4
2	9	4		1	2	1

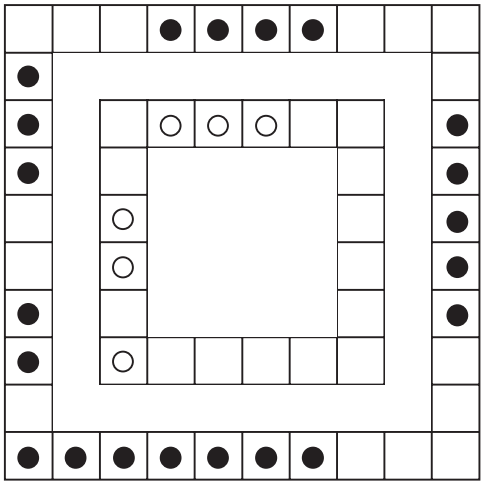
Answer

29. Identify two words (one from each set of brackets) that form a connection (analogy), thereby relating to the words in capitals in the same way.

    PACHYDERM (tough, skin, ruminant, mammal)

    HIRSUTE (shaggy, course, wool, hair)

30.



Place four white circles correctly in the grid in accordance with the rules of logic already established.

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3

IQ Test Three

Circle the answer(s), or write in the answer box provided.

1. Each set of nine numbers relates to the other in a certain way. Work out the logic behind the numbers in the left-hand box in order to determine which number is missing from the right-hand box.

3	5	9		4	2	7
9	6	6		3	8	2
4	8	2		7	9	?

Answer

2. Change the position of three words only in the sentence below in order for it to make complete sense.

   Because housing is necessary for everyone, the problem of providing adequate individuals has long been a concern, not only of shelter but also of governments.

3. SUNDAY
   MONDAY
   TUESDAY
   WEDNESDAY
   THURSDAY
   FRIDAY
   SATURDAY

   What day comes three days after the day which comes two days after the day which comes immediately after the day which comes two days after Monday?

   Answer ☐

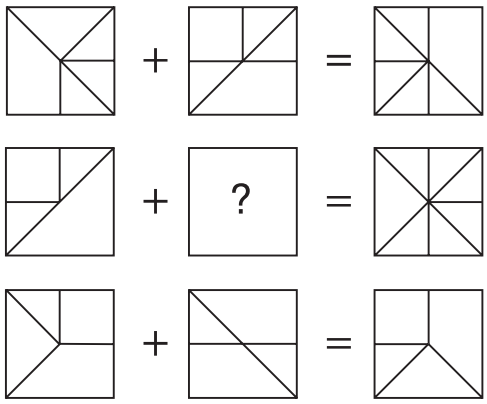
4. Select two words that are synonyms, plus an antonym of these two synonyms, from the list of words below.

   prosaic, equitable, fascinating, predictive, unequal, benign, mundane

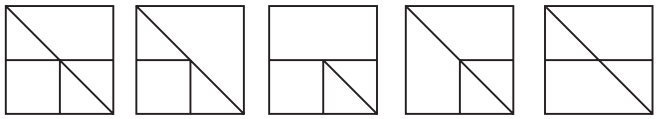
5. What is the value of –26 – –37?

   Answer ☐

6.



Which is the missing square?

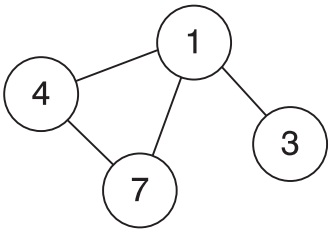


7. Identify two words (one from each set of brackets) that form a connection (analogy), thereby relating to the words in capitals in the same way.

PAR (standard, able, golf, rank)

LEG (foot, bow, self, end)

8. Insert the numbers listed into the circles so that – for any particular circle – the sum of the numbers in the circles connected to it equals the value corresponding to that circled number in the list. For example:

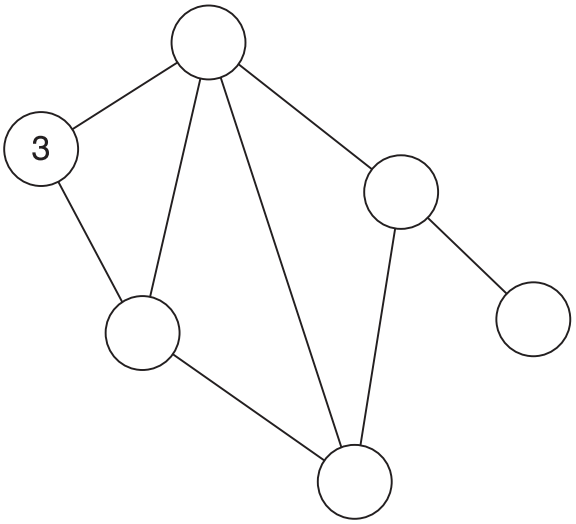


1 = 14 (4 + 7 + 3)

3 = 1

4 = 8 (1 + 7)

7 = 5 (1 + 4)



1 = 2

2 = 12

3 = 10

4 = 14

5 = 12

6 = 14

9. $\frac{69 \times 32}{2^3} = ? \times \frac{48}{3}$

Complete the equation by correctly identifying the missing part of the calculation from the list of options below.

a. $\frac{35}{2}$ b. 16.75 c. 17.25 d. $4^2 + 1.5$ e. 12×1.5

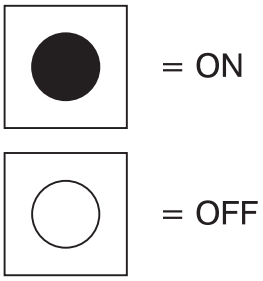
10. An electrical circuit wiring a set of four lights depends on a system of switches A, B, C and D. Each switch when working has the following effect on the lights:

    Switch A turns lights 1 and 2 on/off or off/on

    Switch B turns lights 2 and 4 on/off or off/on

    Switch C turns lights 1 and 3 on/off or off/on

    Switch D turns lights 3 and 4 on/off or off/on



    In the following, switches C A B D are thrown in turn, with the result that Figure 1 is transformed into Figure 2. One of the switches is therefore not working and has had no effect on the numbered lights.

    Identify which one of the switches is not working.

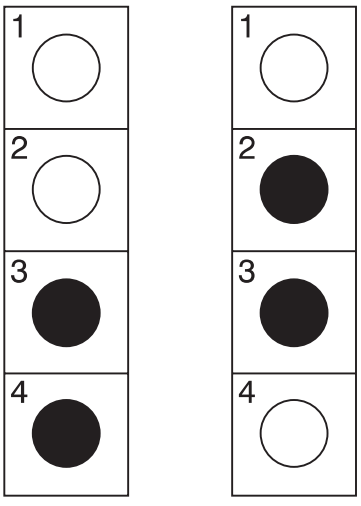


Figure 1 Figure 2

11.

	23694	is to	64239
and	821543	is to	842135
therefore	72915638	is to	?

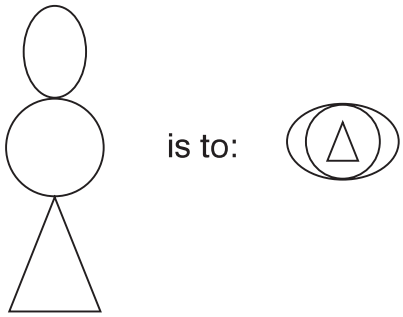
Answer ☐

12. Identify two words (one from each set of brackets) that form a connection (analogy), thereby relating to the words in capitals in the same way.

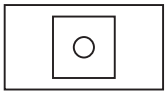
PAINT (brush, colour, dry, pigment)

CONCRETE (solid, set, sand, road)

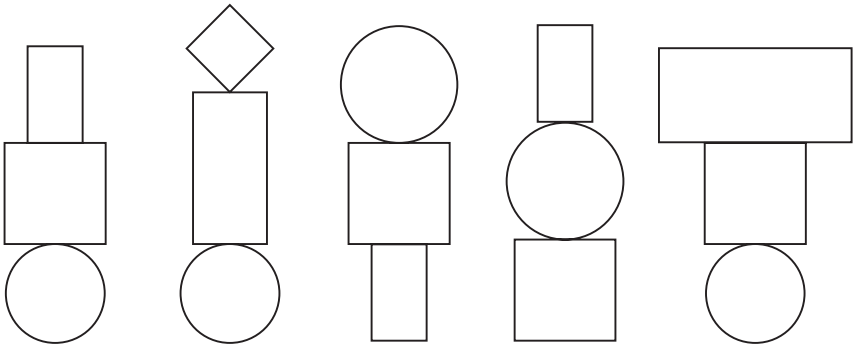
13.



as:



is to:



14. In the two numerical sequences below, one number that appears in the top sequence should appear in the bottom sequence and vice versa. Which two numbers should be changed round?

    16, 39, 63, 90, 120

    18, 36, 60, 88, 120

15. Although he did not enter the bank, he drove the getaway car, which makes him an accessory before the fact.

    One word has been removed from the passage above. Select that word from the choice below and reinstate it into its correct place in the passage.

    a. possibly b. down c. prime d. unfortunately e. legally
    f. sometimes

16.

♠♠♣❤♠♦❤❤♣♣♠♦♠♠♣❤♠♦❤❤♣♣♠♦♠♠♣❤♠♦❤❤
♣♣♠♦♠♠♣❤♠♦❤♣♣♠♦♠♠♣❤♠♦❤❤♣♣♠♦

    Which symbol is missing?

    A ♠
    B ♦
    C ♣
    D ❤

17. Which two words are closest in meaning?

    joint, obese, corporal, genial, physical, harsh