

# Answer Sheet

4th  
Grade

## Answer Sheet Right Triangle: Practice Finding Area

Use the clues provided to find the area of each triangle. Show your work.

### Review:

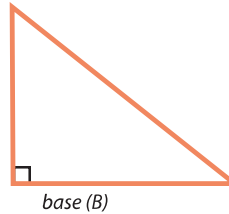
$$\text{Triangle Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

The base of a triangle can be any one of its sides.

The height is the distance from a base to its opposite point, or vertex.

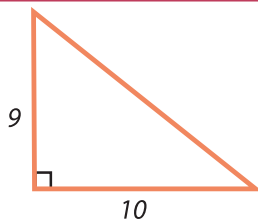
A base must be perpendicular to its height.

height (H)



A right triangle is a triangle that has one right angle (90 degree angle). So the height is the side of a triangle.

Example:

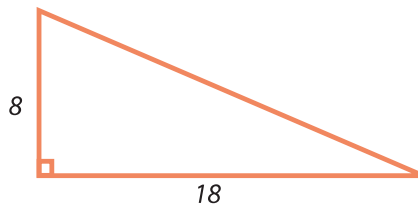


$$\text{Base} = \underline{10} \text{ ft.}$$

$$\text{Height} = \underline{9} \text{ ft.}$$

$$\begin{aligned} \text{Area} &= \frac{1}{2} \times 10 \times 9 \\ &= \underline{45} \text{ sq.ft.} \end{aligned}$$

1

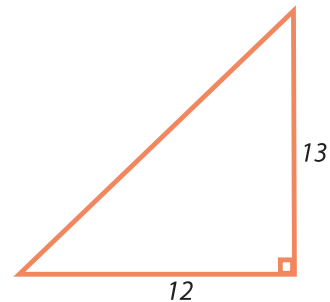


$$\text{Base} = \underline{18} \text{ ft.}$$

$$\text{Height} = \underline{8} \text{ ft.}$$

$$\begin{aligned} \text{Area} &= \frac{1}{2} \times 18 \times 8 = 72 \\ &= \underline{72} \text{ sq.ft.} \end{aligned}$$

2

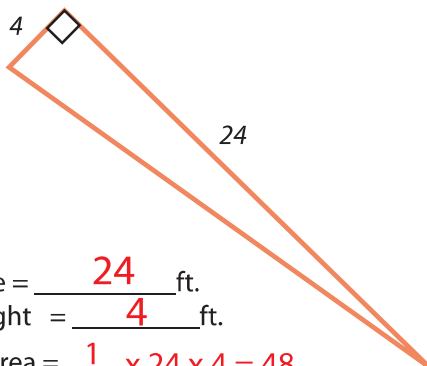


$$\text{Base} = \underline{12} \text{ ft.}$$

$$\text{Height} = \underline{13} \text{ ft.}$$

$$\begin{aligned} \text{Area} &= \frac{1}{2} \times 12 \times 13 = 78 \\ &= \underline{78} \text{ sq.ft.} \end{aligned}$$

3

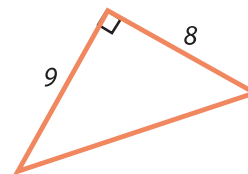


$$\text{Base} = \underline{24} \text{ ft.}$$

$$\text{Height} = \underline{4} \text{ ft.}$$

$$\begin{aligned} \text{Area} &= \frac{1}{2} \times 24 \times 4 = 48 \\ &= \underline{48} \text{ sq.ft.} \end{aligned}$$

4



$$\text{Base} = \underline{8} \text{ ft.}$$

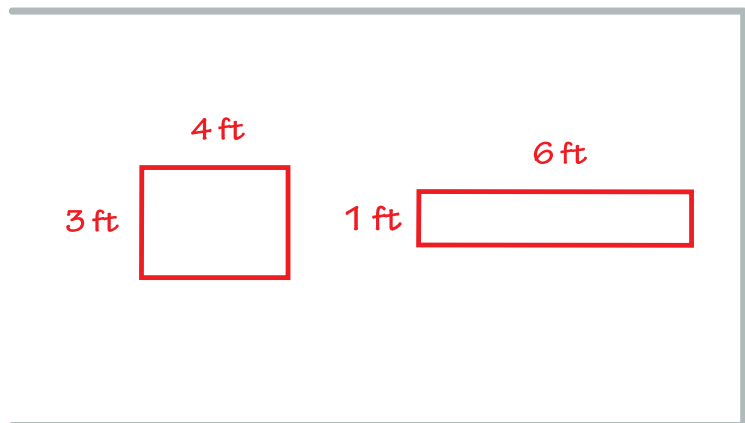
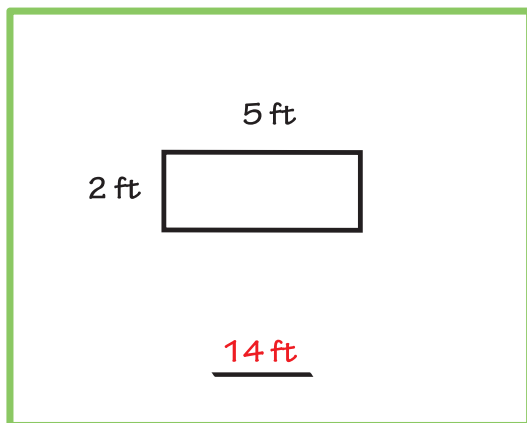
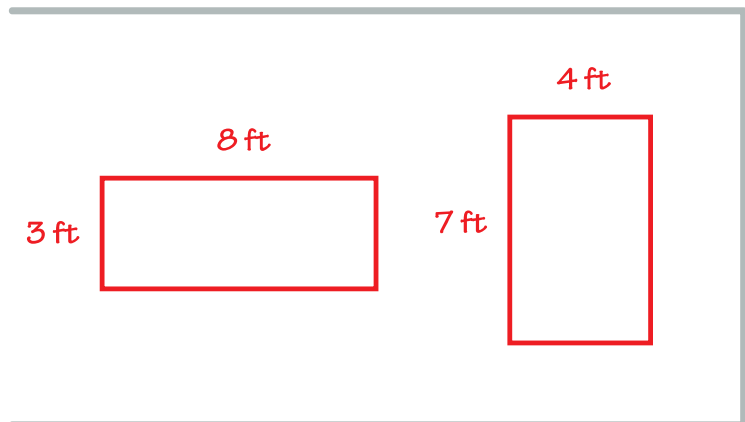
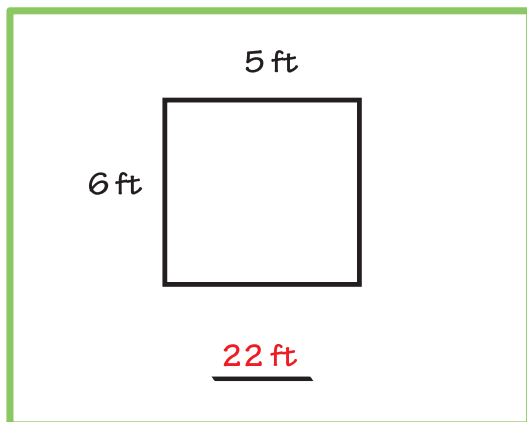
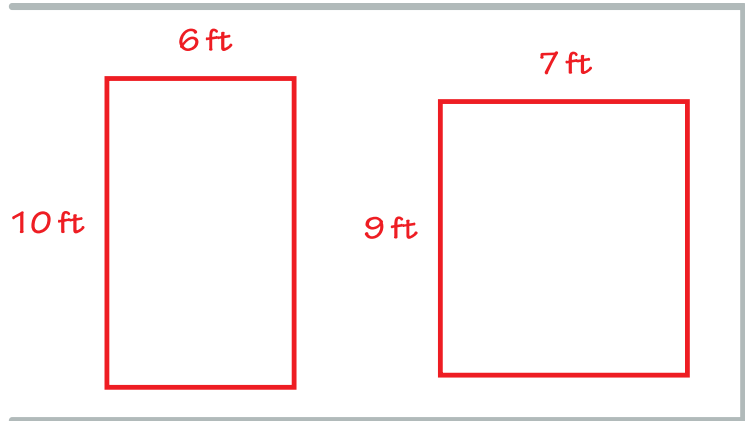
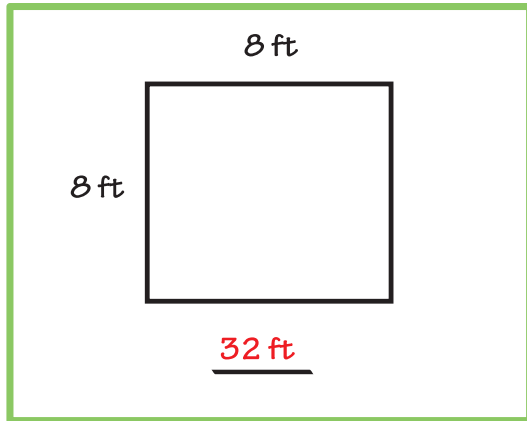
$$\text{Height} = \underline{9} \text{ ft.}$$

$$\begin{aligned} \text{Area} &= \frac{1}{2} \times 8 \times 9 = 36 \\ &= \underline{36} \text{ sq.ft.} \end{aligned}$$

# Answer Sheet

## PERIMETER MATCH

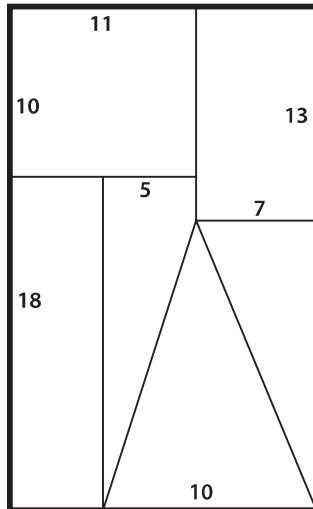
Find the **perimeter** of each rectangle, then draw at least 2 rectangles that have the same perimeter.



# Answer Sheet

## Finding Area: Medium Answer sheet

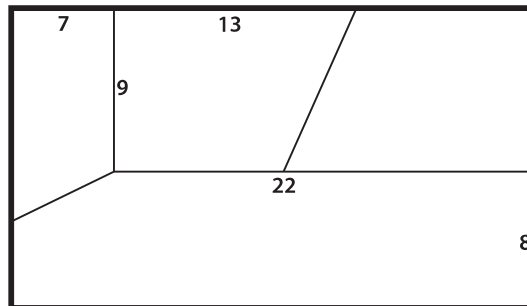
$$11 + 7 = 18$$



$$10 + 18 = 28$$

$$\text{Area} = 18 \times 28 = 504 \text{ sq.ft.}$$

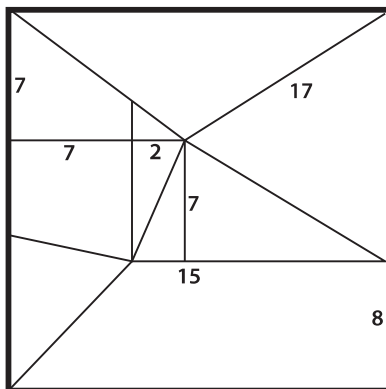
$$7 + 22 = 29$$



$$9 + 8 = 17$$

$$\text{Area} = 29 \times 17 = 493 \text{ sq.ft.}$$

$$7 + 15 = 22$$



$$7 + 7 + 8 = 22$$

$$\text{Area} = 22 \times 22 = 484 \text{ sq.ft.}$$

# Answer Sheet

## Answer Sheet

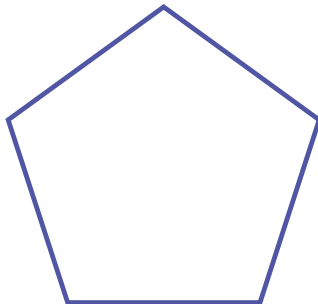
### Pentagon: Calculating Area



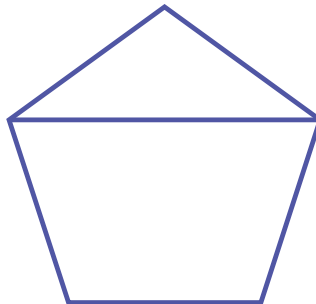
Various answers can apply.  
Here are a few examples.

A pentagon contains many shapes that you probably already know. Use a ruler to divide the pentagon into regular shapes that you are familiar with. Then, name the shapes you created. This will help you practice finding the area of irregular shapes.

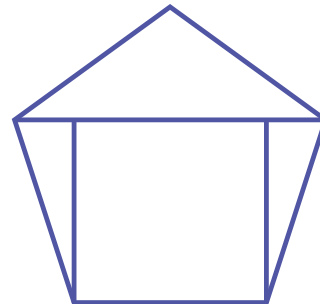
Example:



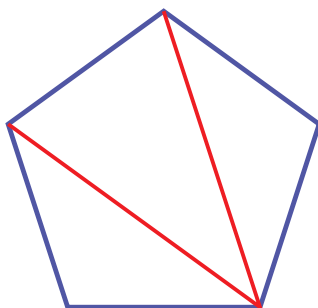
One pentagon



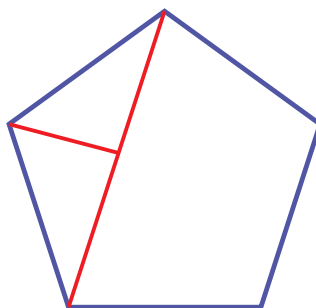
One triangle  
One trapezoid



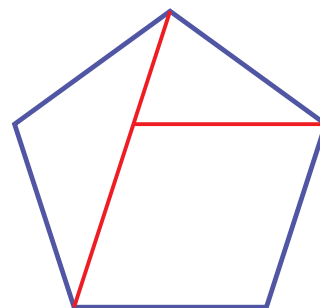
Three triangles  
One rectangle



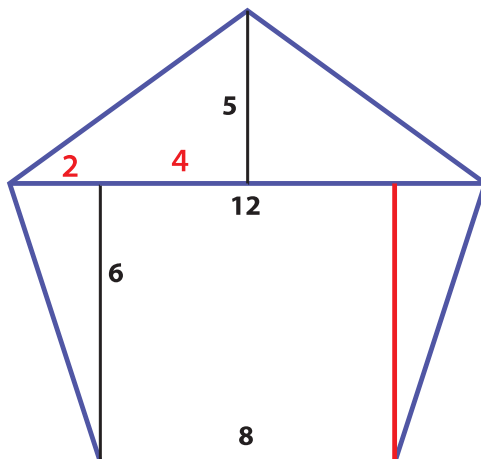
Three triangles



Two triangles  
One trapezoid



One trapezoid  
Two triangles



### Challenge!

Calculate the area of this pentagon using the heights and lengths of the geometric shapes.

triangle area =  $\frac{1}{2}$  base x height

$$\frac{1}{2} 2 \times 6 = 6$$

$$6 \times 2 \text{ triangles} = 12$$

rectangle area = length x width

$$8 \times 6 = 48$$

$$48 \times 1 \text{ rectangle} = 48$$

$$\frac{1}{2} 6 \times 5 = 15$$

$$15 \times 2 \text{ triangles} = 30$$

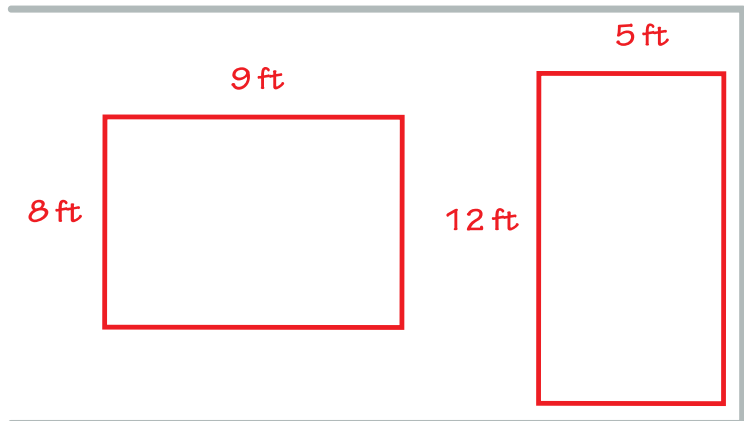
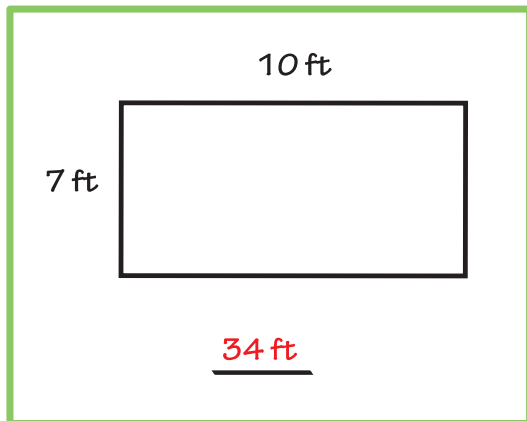
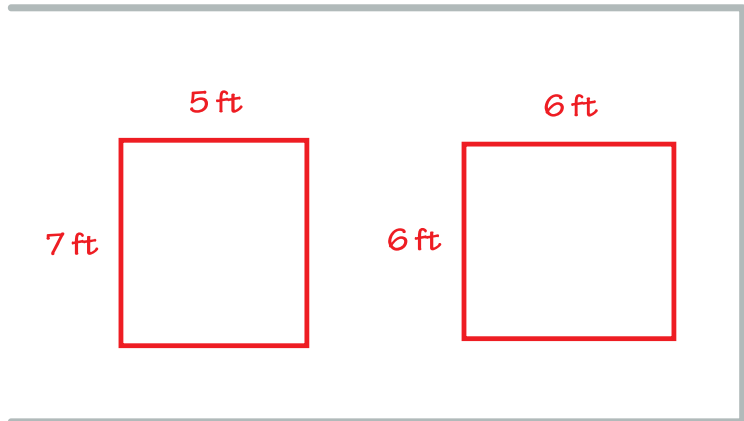
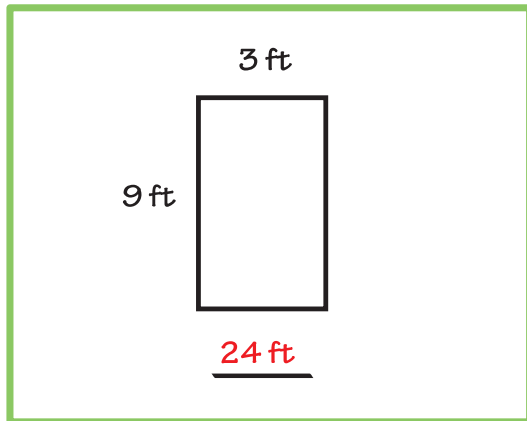
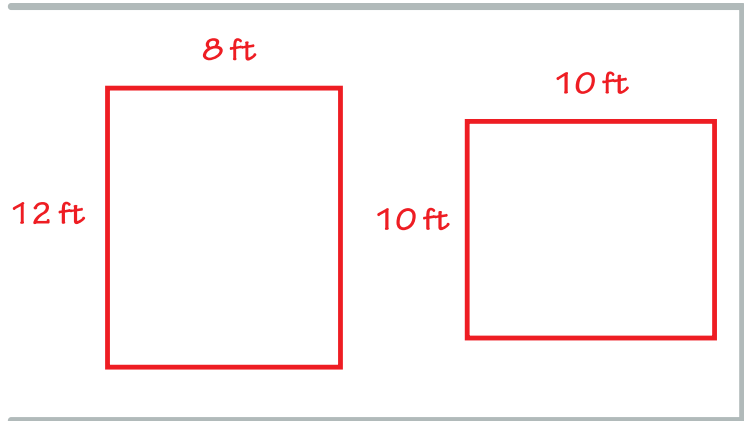
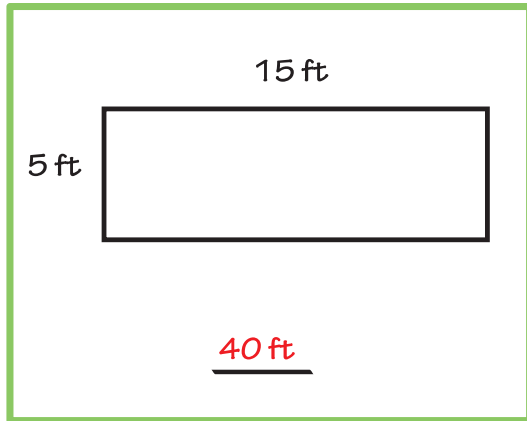
$$12 + 30 + 48 =$$

90

# Answer Sheet

## PERIMETER MATCH

Find the **perimeter** of each rectangle, then draw at least 2 rectangles that have the same perimeter.



# Answer Sheet

4th Grade

## Find a New Home Answer Sheet

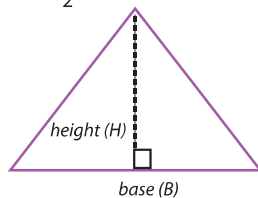


Help Mr. Rabbit find his new home. The total area of his place has to be at least **60** square feet. This includes the area of a roof (triangle) plus the area of the house (rectangle).

**Review:**

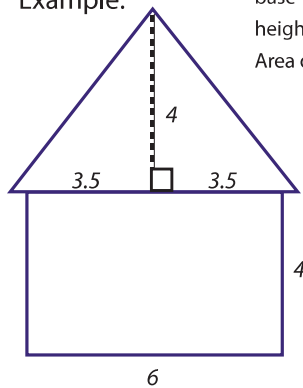
**Rectangle Area** = length x width

**Triangle Area** =  $\frac{1}{2}$  x base x height



The base of a triangle can be any one of its sides.  
The height is the distance from a base to its opposite point, or vertex.  
A base must be perpendicular to its height.

**Example:**



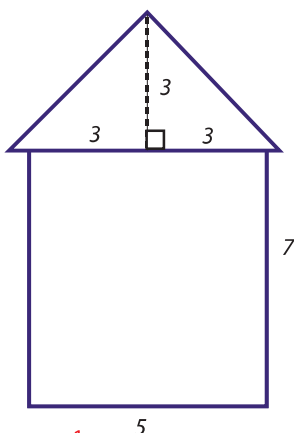
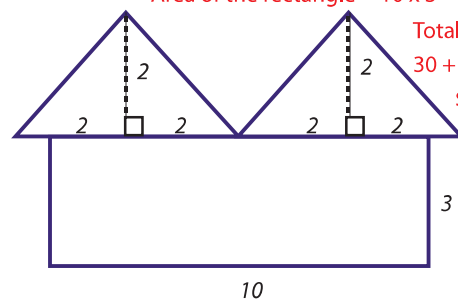
base =  $3.5 + 3.5 = 7$   
height = 4  
Area of the roof =  $\frac{1}{2}$  x base x height  
=  $\frac{1}{2}$  x 7 x 4 = 14  
Area of the rectangle =  $6 \times 4 = 24$   
Total area =  $14 + 24 = 38$  square feet.

base = 4  
height = 2

Area of the roof =  $\frac{1}{2}$  x 4 x 2 = 4     $4 \times 2 = 8$

Area of the rectangle =  $10 \times 3 = 30$

Total Area =  $30 + 8 = 38$  square feet

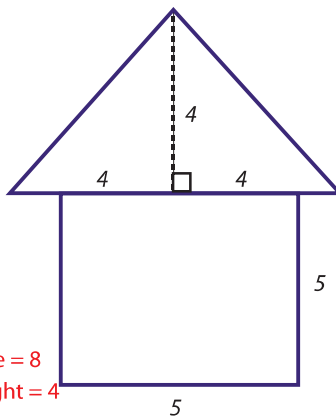


base = 6  
height = 3

Area of the roof =  $\frac{1}{2}$  x 6 x 3 = 9

Area of the rectangle =  $7 \times 5 = 35$

Total Area =  $9 + 35 = 44$  square feet

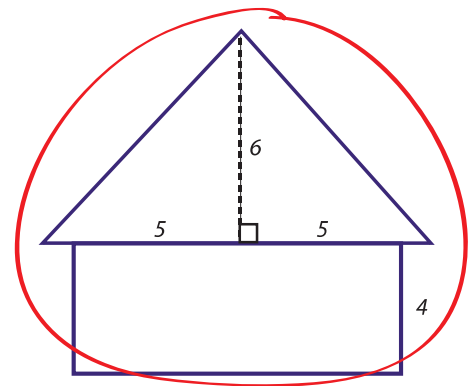


base = 8  
height = 4

Area of the roof =  $\frac{1}{2}$  x 8 x 4 = 16

Area of the rectangle =  $5 \times 8 = 40$

Total Area =  $16 + 40 = 56$  square feet



base = 10  
height = 6

Area of the roof =  $\frac{1}{2}$  x 10 x 6 = 30

Area of the rectangle =  $4 \times 8 = 32$

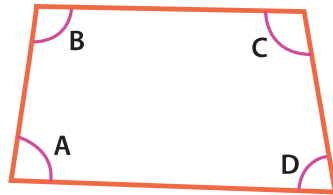
Total Area =  $30 + 32 = 62$  square feet

# Answer Sheet

Math  
Geometry

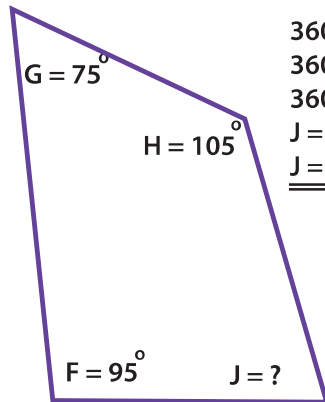
## Answer Sheet The Missing Angle: Quadrilaterals

In every quadrilateral, all four angles add up to  $360^\circ$ .

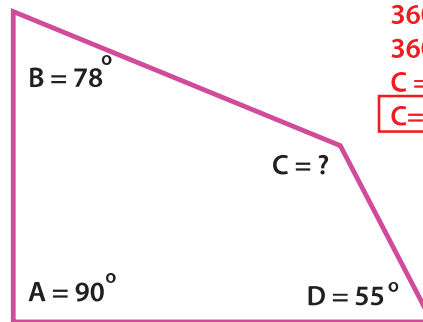


$$360 = A + B + C + D$$

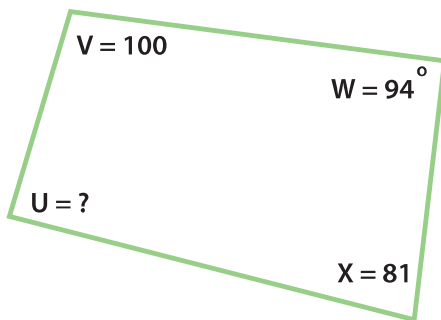
Use this rule to find the missing angle in the quadrilaterals. See the example.



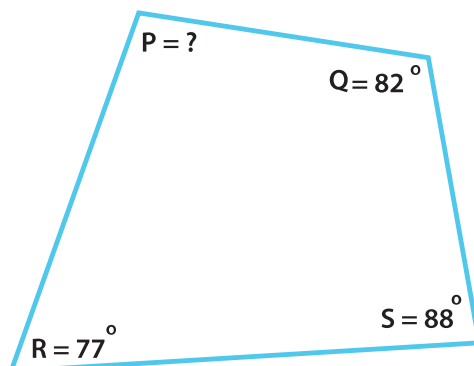
$$\begin{aligned} 360^\circ &= F + G + H + J \\ 360^\circ &= 95^\circ + 75^\circ + 105^\circ + J \\ 360^\circ &= 275^\circ + J \\ J &= 360^\circ - 275^\circ \\ J &= \underline{85^\circ} \end{aligned}$$



$$\begin{aligned} 360^\circ &= A + B + C + D \\ 360^\circ &= 90^\circ + 78^\circ + C + 55^\circ \\ 360^\circ &= 223^\circ + C \\ C &= 360^\circ - 223^\circ \\ C &= \underline{137^\circ} \end{aligned}$$



$$\begin{aligned} 360^\circ &= U + V + W + X \\ 360^\circ &= U + 100^\circ + 94^\circ + 81^\circ \\ 360^\circ &= 275^\circ + U \\ U &= 360^\circ - 275^\circ \\ U &= \underline{85^\circ} \end{aligned}$$



$$\begin{aligned} 360^\circ &= P + Q + R + S \\ 360^\circ &= P + 82^\circ + 77^\circ + 88^\circ \\ 360^\circ &= 247^\circ + P \\ P &= 360^\circ - 247^\circ \\ P &= \underline{113^\circ} \end{aligned}$$

# Answer Sheet

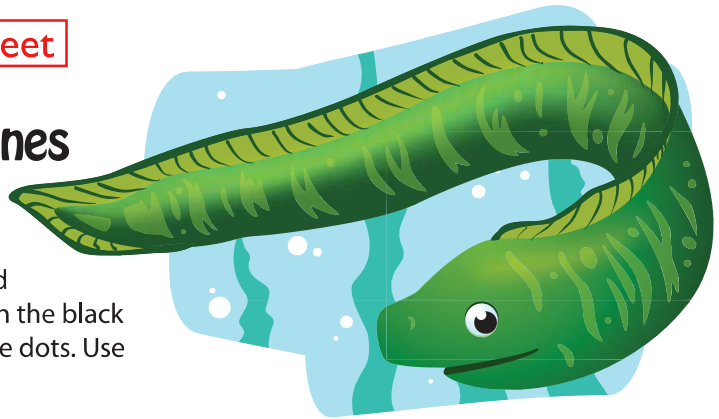
M A T H  
G E O M E T R Y



Answer Sheet

## Parallel and Perpendicular lines

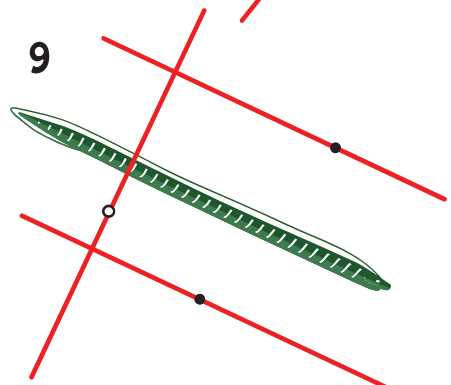
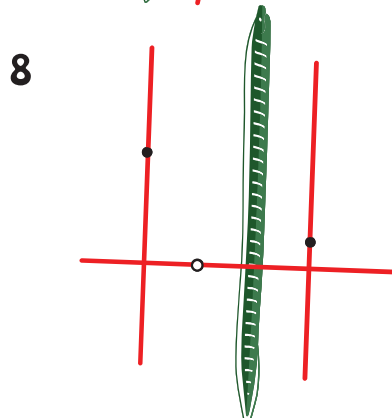
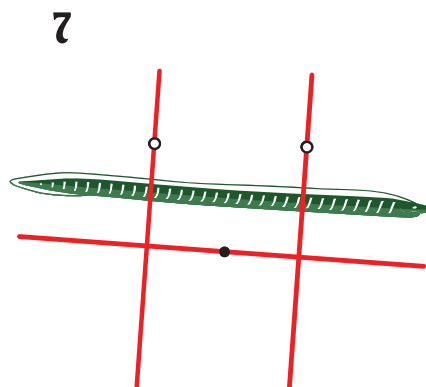
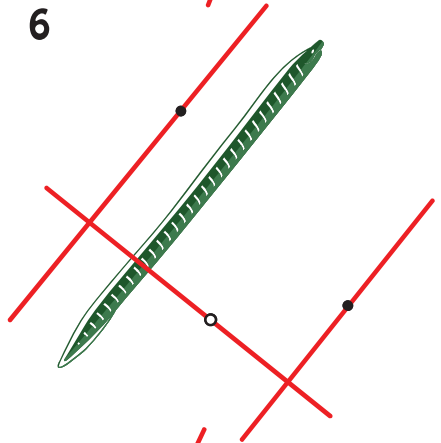
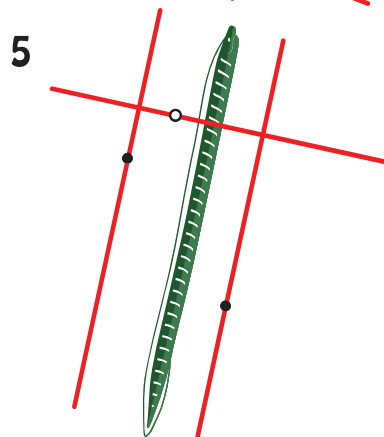
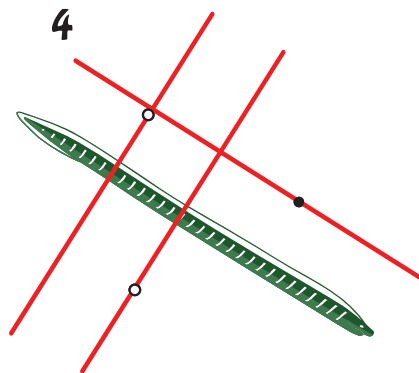
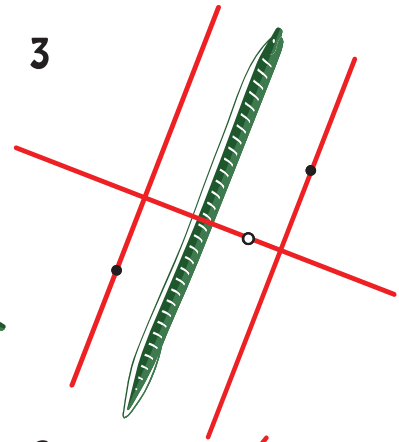
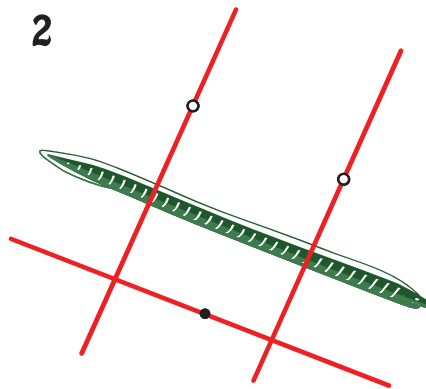
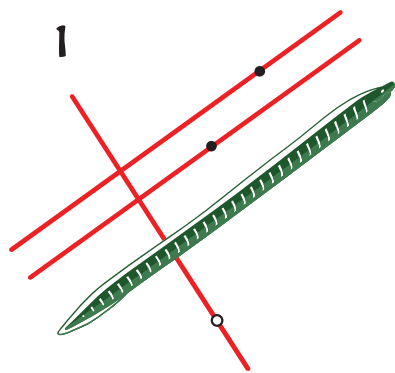
Elouisa the Eel



Elouisa the Eel needs help learning parallel and perpendicular lines. Draw parallel lines through the black dots and perpendicular lines through the white dots. Use a ruler to help you draw straight lines.

● Parallel

○ Perpendicular





# Answer Sheet

MATH  
GEOMETRY

Answer Sheet

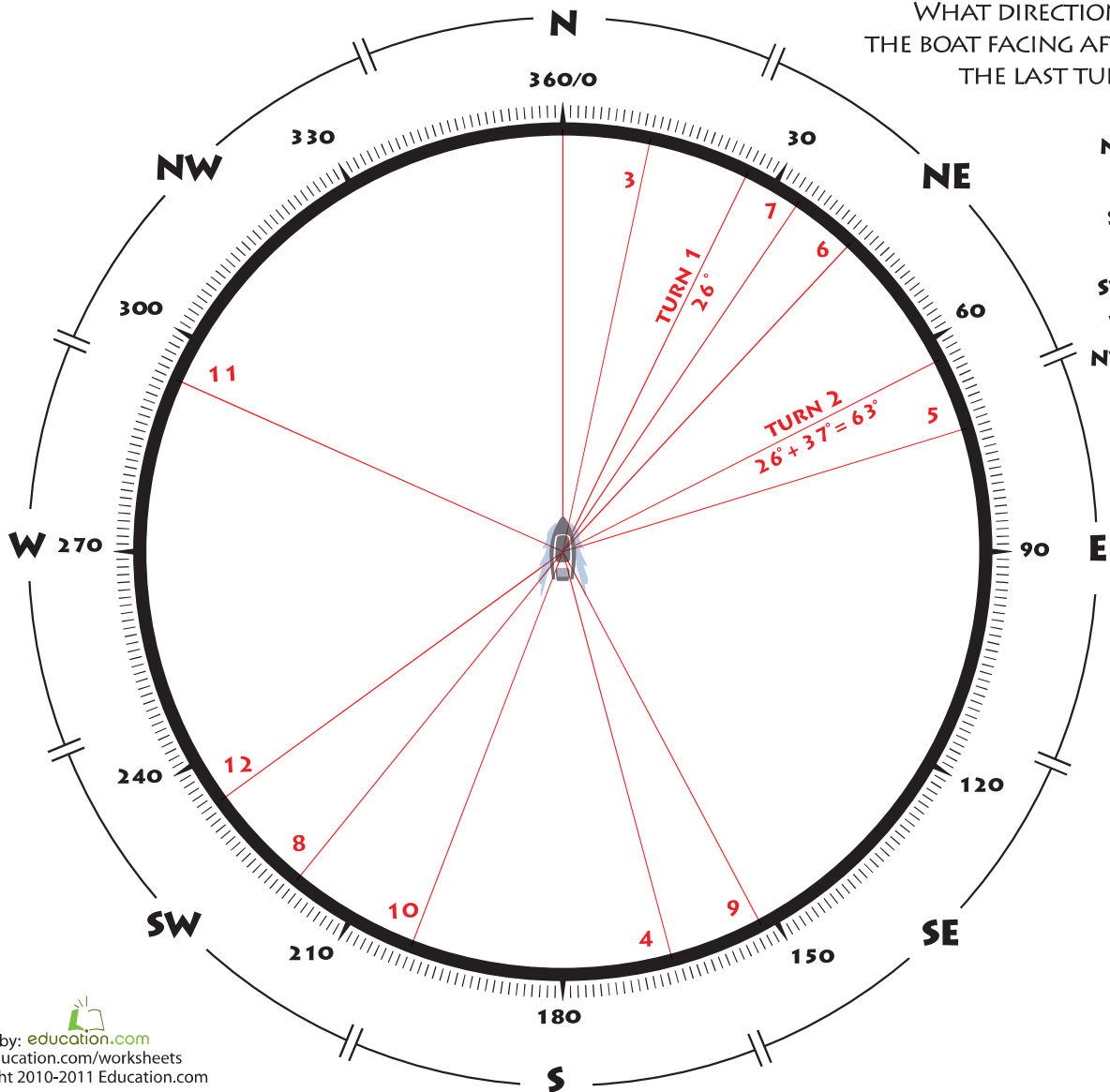
## ANGLE STEERING



Steering a ship requires practice and precision. It also requires you to think about math and angles.

Turn the ship's wheel according to the angle measurements given. See the examples below. With each new turn, indicate the ship's new direction by drawing a line towards it. Turn clockwise if the angle is positive, counterclockwise if it is negative. Use a ruler to help you draw straight lines.

	1	2	3	4	5	6	7	8	9	10	11	12
Turn Degrees	+26°	+37°	-51°	+153°	-92°	-30°	-9°	+185°	-67°	+49°	+93°	-60°
New Direction	26°	63°	12°	165°	73°	43°	34°	219°	152°	201°	294°	234°



WHAT DIRECTION IS THE BOAT FACING AFTER THE LAST TURN?

- N
- NE
- E
- SE
- S
- SW
- W
- NW