Math Virtual Learning

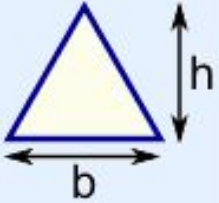# Grade 7
Area of Polygons

May 11, 2020

Objective/Learning Target: Find area of triangles, quadrilaterals, and other polygons composed of triangles and rectangles.
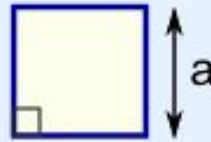
Let's Get Started:
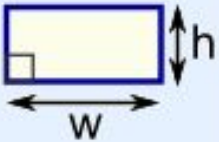Watch Video: Area of Triangles and Quadrilaterals

How to Find Area

Triangle
Area = ½ × b × h
b = base
h = vertical height

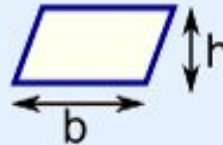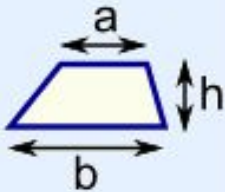### Square
Area = a^2
a = length of side

Rectangle
Area = w × h or Area = L x W
w = width
h = height

Parallelogram
Area = b × h
b = base
h = vertical height

Trapezoid (US)
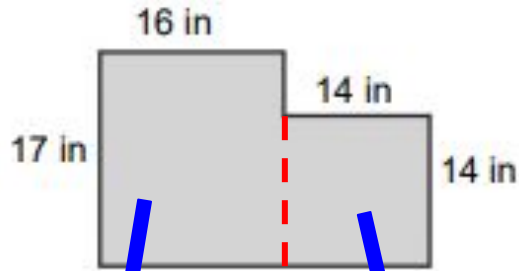### Trapezium (UK)
Area = ½(a+b) × h
h = vertical height

Circle
Area = π × r^2
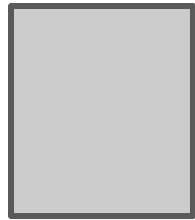Circumference = 2 × π × r
r = radius

Practice:
Find the area of the figures.

16 in

14 in

17 in

14 in

Divide the figures into regular shapes.

15 cm

20 cm

10 cm
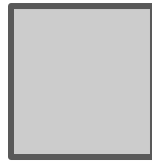
Find the area of each shape.

+

+

L x W = A
16 x 17 = 272

L x W = A
14 x 14 = 196

L x W = A
20 x 15 = 300

½ b x h = A
½ (15) x 10 = 75

Add the area of the shapes.

$272 + 196 = 468 \; in^2$ ← Correct Answer

$300 + 75 = 375 \; cm^2$ ← Correct Answer

Practice:
Go to these websites:
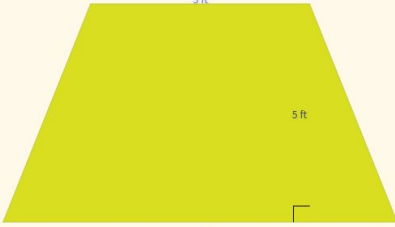
1. Look at the question carefully.
2. Make sure to have pencil and paper ready.
3. Solve the problem.
4. Type in the answer and then click "Answer".
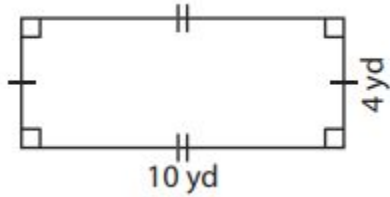
What is the area?
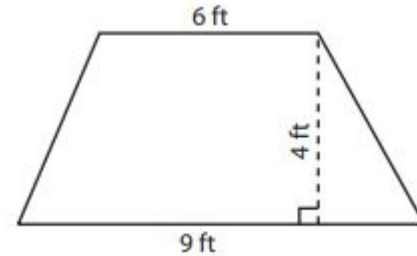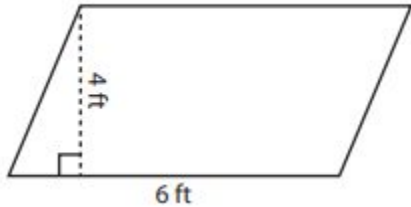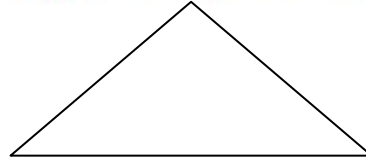
5 ft

5 ft

ft^2

9 ft

Answer

Practice:

Answer the questions on a piece of paper.
Find the area of the given figures.

Find the area of the triangle whose base is 32 inches and height is 16 inches.

4 yd

10 yd

4 ft

6 ft

6 ft

4 ft

9 ft

Practice:

Answer the questions on a piece of paper.
Find the area of the given figures.

36 yd

36 yd

36 yd

60 yd

16 ft

8 ft

16 ft

10 m   1 m

6 m

1 m

6 m

10 yd

12 yd

22 yd

Answer Key:

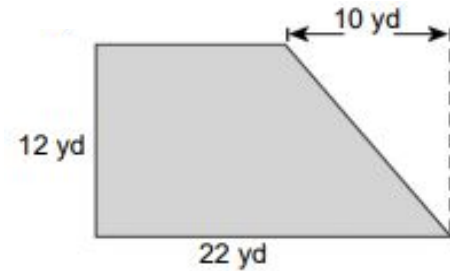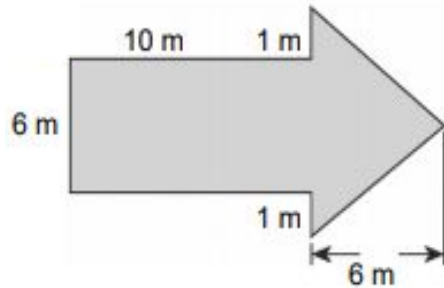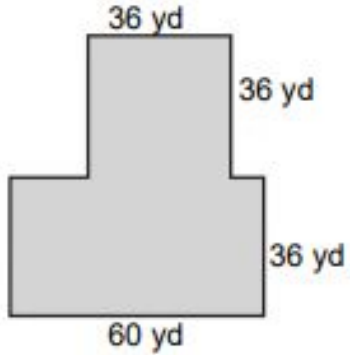Once you have completed the problems, check your answers here.

Find the area of the triangle whose base is 32 inches and height is 16 inches.

L x W = A
10 x 4 = **40** yd^2 ◄ Correct Answer
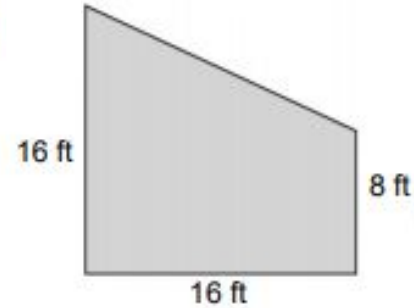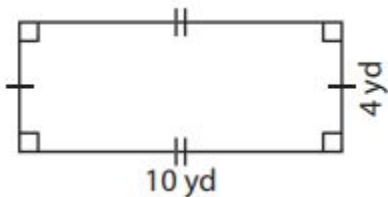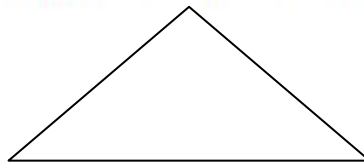
½ b x h = A
½ (32) x 16 = **256** in^2 ◄ Correct Answer

b x h = A
6 x 4 = **24** ft^2 ◄ Correct Answer
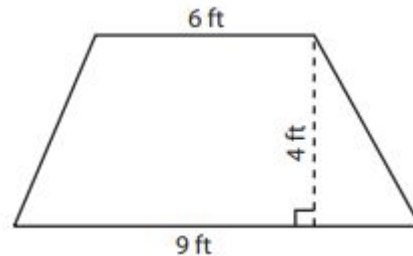
½ (base a + base b) x h = A
½ (9 +6) x 4 = **30** ft^2 ◄ Correct Answer

Answer Key:

Once you have completed the problems, check your answers here.

First figure (left):

36 yd

36 yd

36 yd

60 yd

+

L x W = A
36 x 36 = 1296
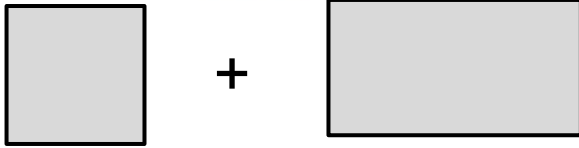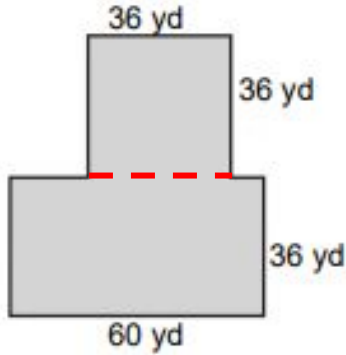
L x W = A
60 x 36 = 2160

1296 + 2160 = **3456** yd^2 ◀ Correct Answer

Second figure (right):

16 ft

8 ft

16 ft

+

L x W = A
18 x 8 = 144
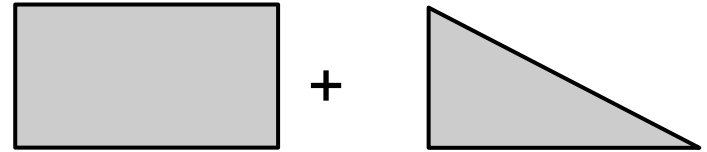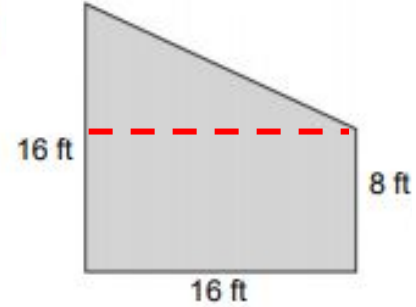
½ b x h = A
½ (16) x 8 = 64

144 + 64 = **208** ft^2 ◀ Correct Answer

Answer Key:

Once you have completed the problems, check your answers here.

L x W = A
10 x 6 = 30
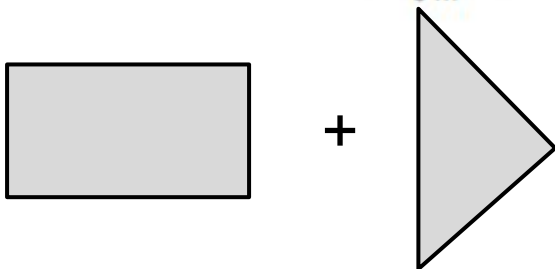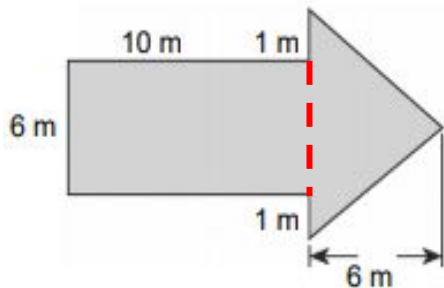
½ b x h = A
½ (6+1+1) x 6 = 24

30+ 24 = **54** m^2 ⬅ Correct Answer

L x W = A
(22-10) x 12 = 144
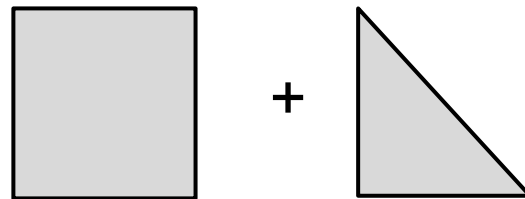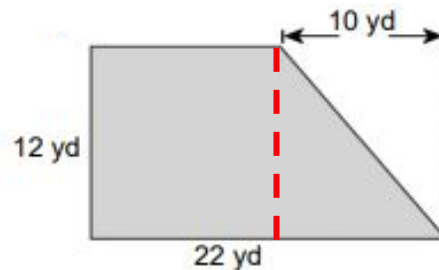
½ b x h = A
½ (10) x 12 = 60

144+ 60 = **204** yd^2 ⬅ Correct Answer

Additional Practice:

Click on the links below to get additional practice and to check your understanding!

[IXI](#) - Practice Quadrilaterals

[IXI](#) - Practice Triangles

[Open Middle](#) - Challenge Triangles

[Open Middle](#) - Challenge Quadrilaterals

Additional Practice: Challenge
Click on the links below to get additional practice and to check your understanding!

[Khan Academy](#) - Complex Figures

1. Watch the video and then work on the 4 practice problems.
2. Type in your answer and then click "Check".
3. Click "Next question".
4. If you get an answer incorrect, click "Get help" for step by step hints.

Not quite!

Try again, Get help, or move on.

3 of 4 ● ● ● ○   **Try again**