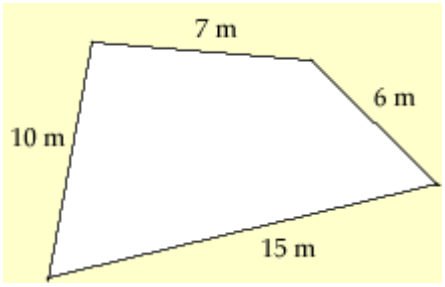
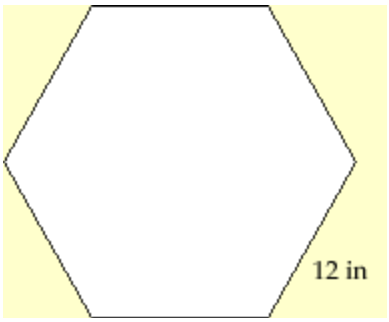
Review Exercise Set 27

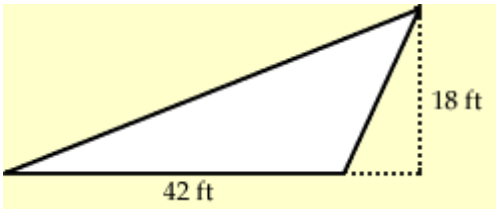
Exercise 1: Find the perimeter of the figure below.



Exercise 2: Find the perimeter of a regular hexagon that measures 12 inches on each side.



Exercise 3: Find the area of the figure below.

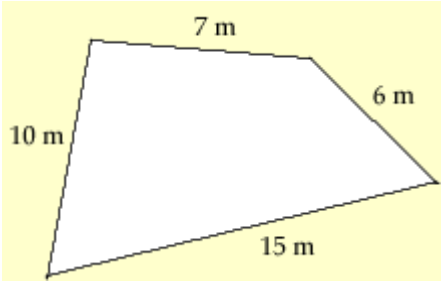


Exercise 4: The area of a parallelogram is 300 m^2. If the length of the base is 20 m, what is the length of the height?

Exercise 5: You need to paint the walls of your living room. Two of the walls measure 25 ft by 10 ft, and the other two walls measure 15 ft by 10 ft. The paint you want to use is on sale for \$11.99 per gallon. If you can cover 200 ft^2 with each gallon of paint, how much you would have to spend on paint?

Review Exercise Set 27 Answer Key

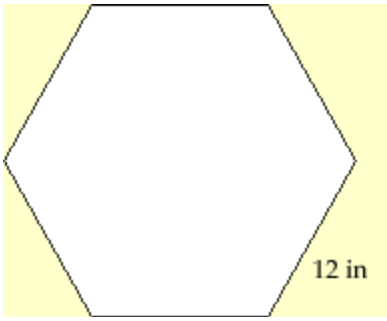
Exercise 1: Find the perimeter of the figure below.



The perimeter of the given figure would be the sum of the lengths of its sides.

P = 7 m + 6 m + 15 m + 10 m
P = 38 m

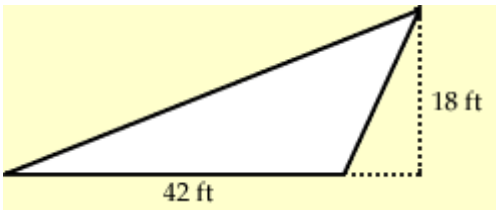
Exercise 2: Find the perimeter of a regular hexagon that measures 12 inches on each side.



A regular hexagon is one where all of its sides are the same length. Since a hexagon has six sides the perimeter of a hexagon would be six times the length of the sides.

P = 6s
P = 6(12 in)
P = 72 in

Exercise 3: Find the area of the figure below.



The area of a triangle is one-half times the base times the height.

$A = \frac{1}{2}$ bh

$A = \frac{1}{2}$ (18 ft)(42 ft)

A = (9 ft)(42 ft)

A = 378 ft^2

Exercise 4: The area of a parallelogram is 300 m^2. If the length of the base is 20 m, what is the length of the height?

The area of a parallelogram is the base times height.

Let x = the unknown height

A = bh

300 m^2 = (20 m)(x)

$\frac{300\ m^2}{20\ m}$ = x

15 m = x

The height of the parallelogram is 15 m.

Exercise 5: You need to paint the walls of your living room. Two of the walls measure 25 ft by 10 ft, and the other two walls measure 15 ft by 10 ft. The paint you want to use is on sale for $11.99 per gallon. If you can cover 200 ft^2 with each gallon of paint, how much you would have to spend on paint?

First, we need to determine the total area to be painted. The walls are in the shape of a rectangle so the area would be equal to the length times width.

The area of one 25 ft by 10 ft wall is:

$A = lw$
$A = (25\ ft)(10\ ft)$
$A = 250\ ft^2$

The area of one 15 ft by 10 ft wall is:

$A = lw$
$A = (15\ ft)(10\ ft)$
$A = 150\ ft^2$

The room has four walls to be painted so the total area would be equal to twice the area of a 25x10 ft wall plus twice the area of a 15x10 ft wall.

$A = 2A_{25x10} + 2A_{15x10}$

$A = 2(250\ ft^2) + 2(150\ ft^2)$
$A = 500\ ft^2 + 300\ ft^2$
$A = 800\ ft^2$

Next, we need to determine how many gallons of paint we will need.

We know that we must paint a total area of 800 ft^2 and that each gallon of paint will cover 200 ft^2, so we can setup our equation as a measurement conversion like we did when converting units of measurement in earlier sections.

$$800\ ft^2 \times \frac{1\ gallon}{200\ ft^2} = \frac{800}{200}\ gallons = 4\ gallons$$

Finally, we can calculate the cost of the paint by multiplying the number of gallons needed by the price per gallon.

4 gallons * $11.99/gallon = $47.96

The total cost for the paint will be $47.96.