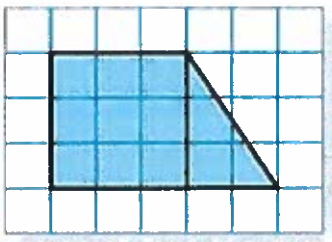
Chapter 9 Lesson 6

Area of Composite Figures

Composite figure: a figure made of two or more two-dimensional figures.



Area of Square

$A = \ell \cdot w$

$A = 3 \cdot 3$, or 9

Area of Triangle

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

$A = \frac{1}{2}(2)(3)$, or 3

Steps:

1) Split the composite figure into shapes you know.
2) Find the area of area of each shape.
3) Then add the areas of the shapes together to find the total area of the composite figure.

Examples:

Find the area of the figure:

Figure 1: rectangle

$A = bh$

$A = 8 \cdot 5.5$

$A = 44\ ft^2$

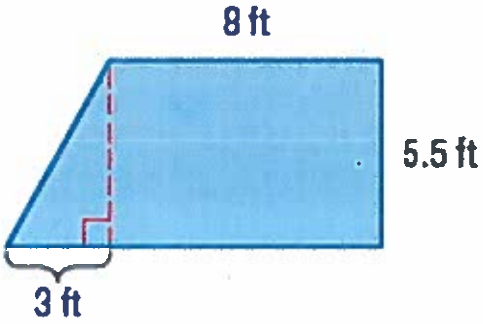


Figure 2: triangle

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

$A = \frac{1}{2}(3)(5.5)$ $A = \frac{3 \cdot 5.5}{2}$

$A = \frac{1}{2}(16.5)$ $A = \frac{16.5}{2}$

$A = 8.25\ ft^2$ $A = 8.25\ ft^2$

$$\begin{array}{r} 44.00 \\ +\ 8.25 \\ \hline 52.25 \end{array}$$

Total Area: $52.25\ ft^2$

Find the area of the figure:

Figure 1: Rectangle 1

$A=bh$

$A=4.8\cdot 2.1$

$A=10.08 yds^2$

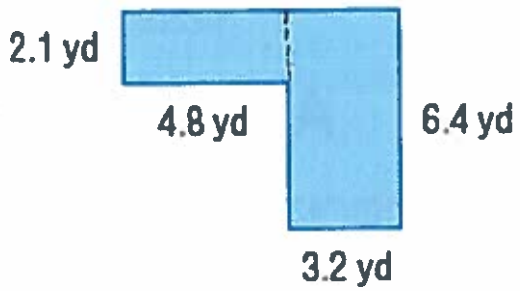


Figure 2: Rectangle 2

$A=bh$

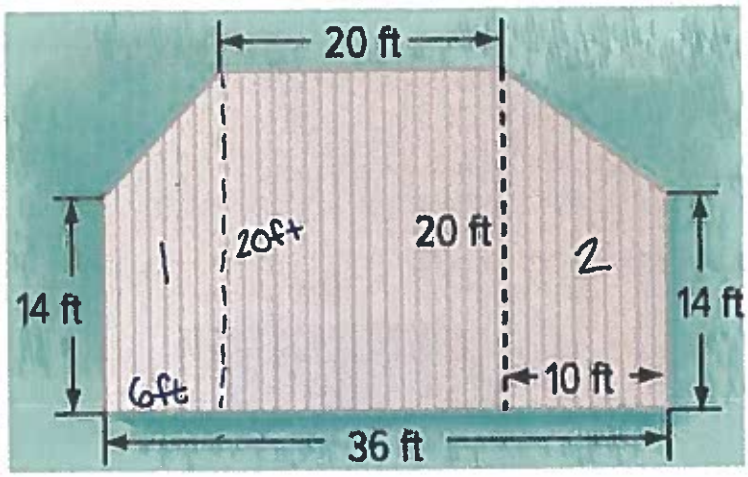
$A=3.2\cdot 6.4$

$A=20.48 yds^2$

$$\begin{array}{r} 10.08 \\ +\,20.48 \\ \hline 30.56 \end{array}$$

Total area: $30.56 yds^2$

Find the area of the deck.



$$\begin{array}{r} 36 \\ -10 \\ -20 \\ \hline 6 \end{array}$$

Figure 1: trapezoid 1	Figure 2: Square	Figure 3: trapezoid 2
$A=\frac{1}{2}h(b_1+b_2)$ $A=\frac{1}{2}(6)(14+20)$ $A=\frac{1}{2}(6)(34)$ $A=3(34)$ $A=102 ft^2$	$A=bh$ $A=20\cdot 20$ $A=400 ft^2$	$A=\frac{1}{2}h(b_1+b_2)$ $A=\frac{1}{2}(10)(14+20)$ $A=\frac{1}{2}(10)(34)$ $A=5(34)$ $A=170 ft^2$

$$\begin{array}{r} 102 \\ 400 \\ +\,170 \\ \hline 672 \end{array}$$

Total Area of deck: $672 ft^2$