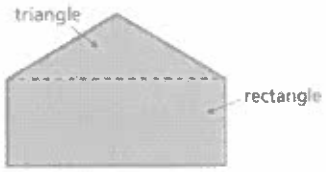
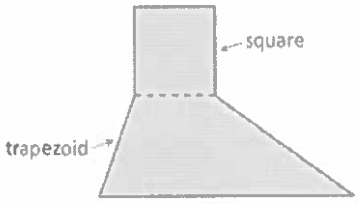
# 4.3 Extension
# Areas of Composite Figures

Essential Question: What is a composite figure and how do you find the area of one?

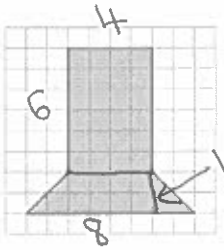



**COMPOSITE FIGURE**-> made up of triangles, squares, and rectangles and other two-dimensional figures.

To find the area of a composite figure, separate it into figures with areas you know how to find. Then find the sum of the areas of those figures.

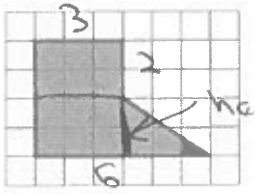
Find the area of the composite figure.




TA = 24 units² + 12 units² = 36 units²

Area of Rectangle
A = lw
A = 6 · 4
A = 24 units²

Area of Trapezoid
$A = \frac{2(4+8)}{2}$
$A = \frac{2(12)}{2}$
$A = \frac{24}{2} = 12 \text{ units}^2$

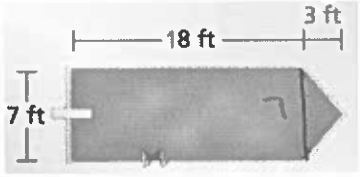



Area of Rectangle
A = 3 · 2
A = 6 units²

TA = 6 units² + 9 units² = 15 units²

Area of Trapezoid
$A = \frac{2(3+6)}{2}$
$A = \frac{2(9)}{2}$
$A = \frac{18}{2} = 9 \text{ units}^2$

Find the area of the swimming pool.

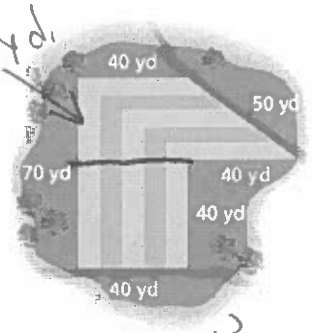



Area of rectangle
A = 7 · 18
A = 126 ft²

Area of Triangle
$A = \frac{7(3)}{2}$
$A = \frac{21}{2} = 10.5 \text{ ft}^2$

TA = 126 ft² + 10.5 ft²
= 136.5 ft²

Find the area of the fairway between two streams on a golf course.




Area of Square

$A = 40^2$

$A = 1600\ yd^2$

Area of Trapezoid

$A = \frac{30(40+80)}{2}$

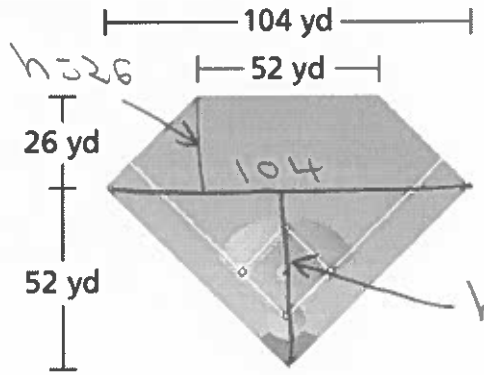
$A = \frac{30(120)}{2}$

$A = \frac{3600}{2} = 1800\ yd^2$

$TA = 1600\ yd^2 + 1800\ yd^2$

$= 3400\ yd^2$

Find the area of the softball field.




Area of Triangle

$A = \frac{104(52)}{2}$

$A = \frac{5408}{2}$

$A = 2704\ yd^2$

Area of Trapezoid

$A = \frac{26(52+104)}{2}$

$A = \frac{26(156)}{2}$

$A = \frac{4056}{2}$

$A = 2028\ yd^2$

$TA = 2704\ yd^2 + 2028\ yd^2 = 4732\ yd^2$