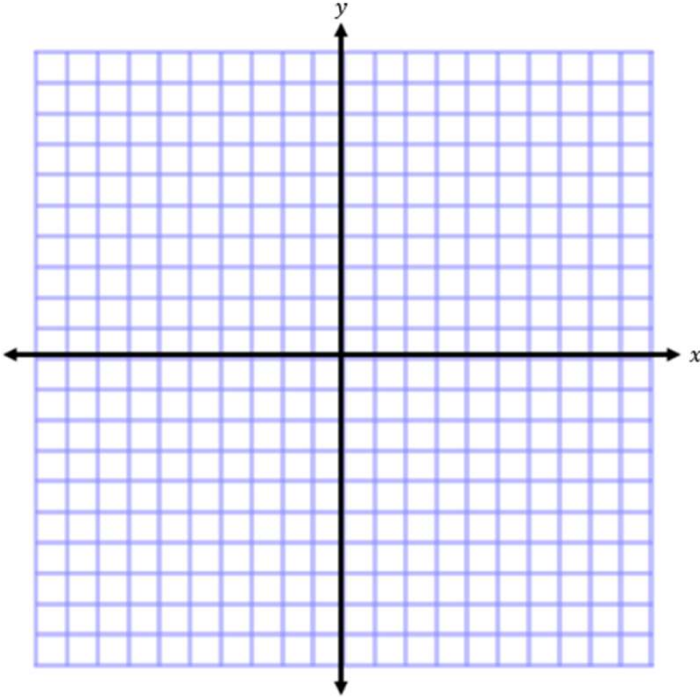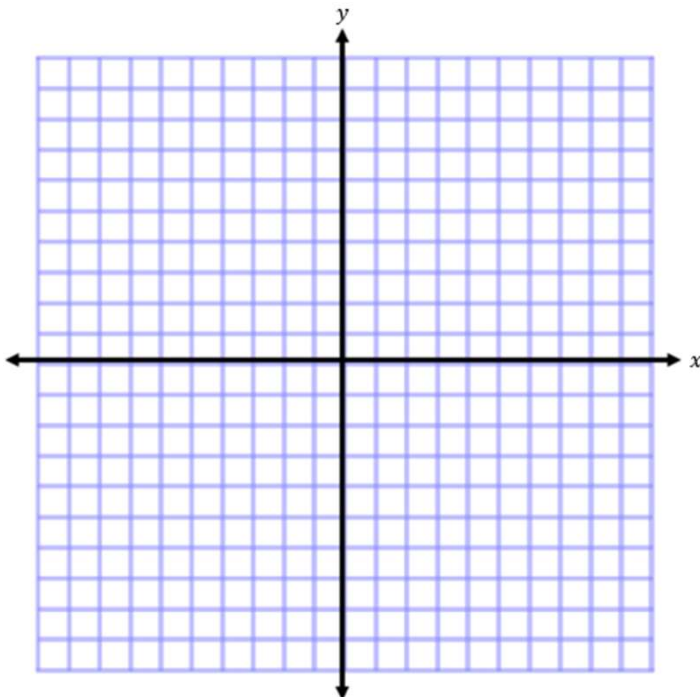# Geometry Worksheets
(Area of Polygons in the Coordinate Plane)

1. Plot and connect the points $A(3,2)$, $B(3,7)$, and $C(8,2)$. Name the shape, and determine the area of the polygon.

2. Plot and connect the points $E(-8,8)$, $F(-2,5)$, and $G(-7,2)$. Then give the best name for the polygon, and determine the area.

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(Area of Polygons in the Coordinate Plane)

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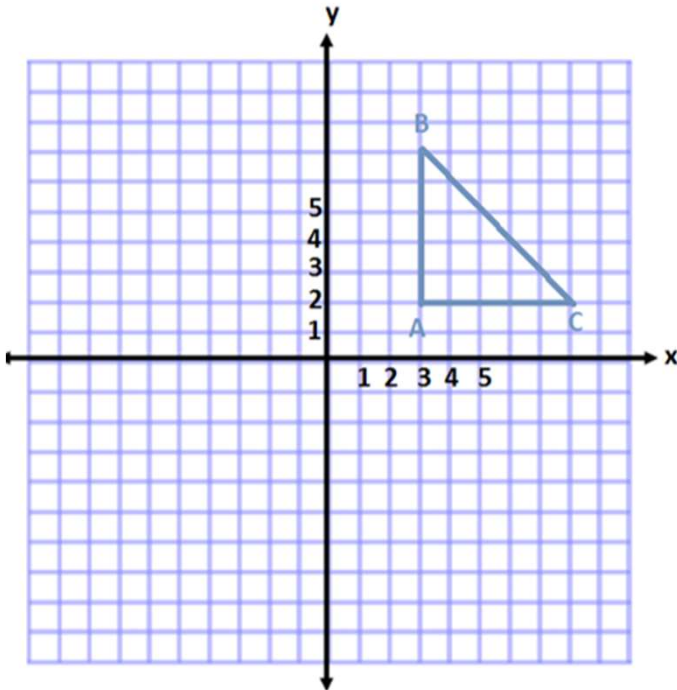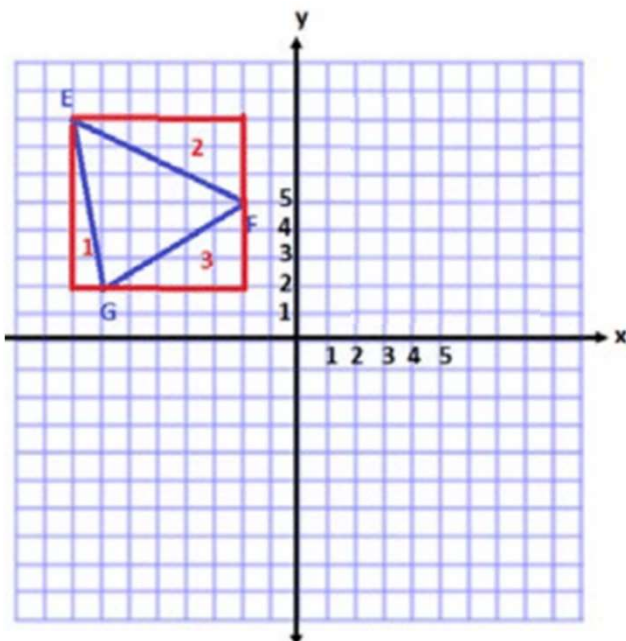
Right Triangle

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

$$A = \frac{1}{2}(5 \text{ units})(5 \text{ units})$$

$$A = \frac{1}{2}(25 \text{ units}^2)$$

$$A = 12.5 \text{ units}^2$$

2. Plot and connect the points $E(-8,8)$, $F(-2,5)$, and $G(-7,2)$. Then give the best name for the polygon, and determine the area.

The shape is a triangle.

Area of Square

$A = s^2$

$A = (6 \text{ units})^2$

$A = 36 \text{ units}^2$

Area of Triangle 1

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

$A = \frac{1}{2}(1 \text{ unit})(6 \text{ units})$

$A = \frac{1}{2}(6 \text{ units}^2)$

$A = 3 \text{ units}^2$

Area of Triangle 2

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

$A = \frac{1}{2}(6 \text{ units})(3 \text{ units})$

$A = \frac{1}{2}(18 \text{ units}^2)$

$A = 9 \text{ units}^2$

Area of Triangle 3

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

$A = \frac{1}{2}(5 \text{ units})(3 \text{ units})$

$A = \frac{1}{2}(15 \text{ units}^2)$

$A = 7.5 \text{ units}^2$

Total Area of Triangle

$A = 36 \text{ units}^2 - 3 \text{ units}^2 - 9 \text{ units}^2 - 7.5 \text{ units}^2$

$A = 16.5 \text{ units}^2$

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