4.4 Polygons in the Coordinate Grid Name _____

I can draw polygons in the coordinate plane when I am given the coordinates for vertices.

Notes:

The vertices of a rectangle are $F(1, 6)$, $G(7, 6)$, $H(7, 2)$, and $J(1, 2)$. Draw the rectangle in a coordinate plane and find its perimeter.

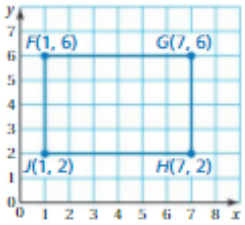
Draw the rectangle and use the vertices to find its dimensions.

The length is the horizontal distance between $F(1, 6)$ and $G(7, 6)$, which is the difference of the x-coordinates.

$\text{length} = 7 - 1 = 6 \text{ units}$

The width is the vertical distance between $G(7, 6)$ and $H(7, 2)$, which is the difference of the y-coordinates.

$\text{width} = 6 - 2 = 4 \text{ units}$



Perimeter:

P = 2b + 2h
2(6) + 2(4)
20 units

Area:

A = bh
(6)(4)
24 units^2

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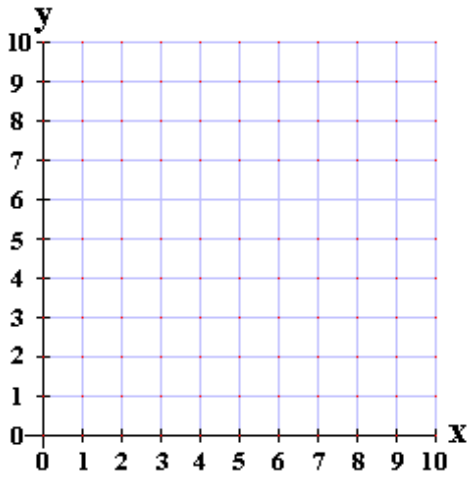
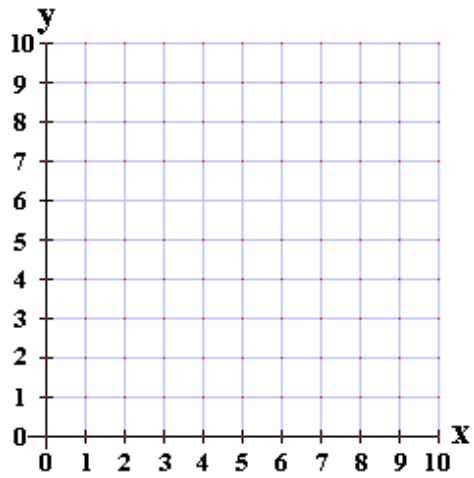
Draw the polygon in a coordinate plane, and find the perimeter and area of each polygon.

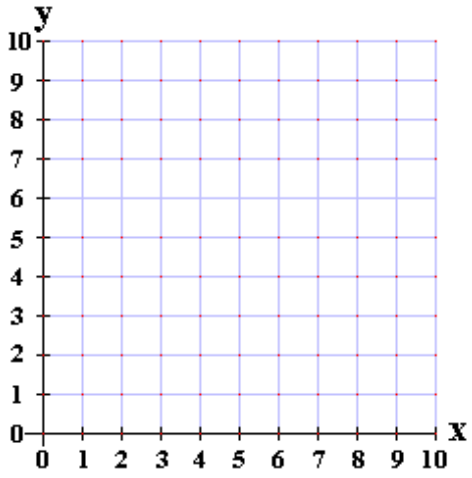
12. $C(1, 1)$, $D(1, 4)$, $E(4, 4)$, $F(4, 1)$



13. $J(1, 2)$, $K(7, 2)$, $L(7, 8)$, $M(1, 8)$



14. $N(0, 2)$, $P(5, 2)$, $Q(5, 5)$, $R(0, 5)$



15. $S(3, 0)$, $T(3, 9)$, $U(8, 9)$, $V(8, 0)$