## Quick Review

At Home At School

➤ A **coordinate grid** is formed when a horizontal number line and a vertical number line intersect at right angles at 0.

➤ The horizontal number line is the **x-axis**. The vertical number line is the **y-axis**. They meet at the **origin**.

➤ The axes divide the grid into 4 **quadrants** numbered 1, 2, 3, and 4 counterclockwise.

➤ Points on the axes do not belong to any quadrant.

➤ A point on a coordinate grid is located by an **ordered pair** of numbers. The first number, the x-coordinate, tells how far left or right of the origin the point is. The second number, the y-coordinate, tells how far up or down from the origin the point is. For example, (–4, 6) is 4 units left of the origin and 6 units up.
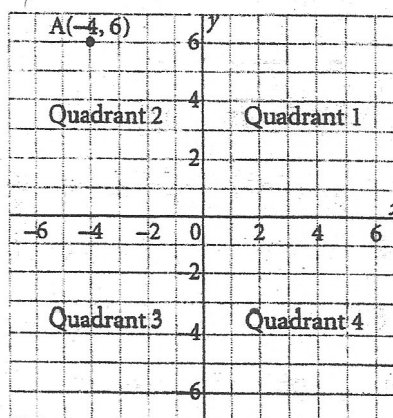
## Practice

1. Use each letter once. Complete these descriptions for points in the diagram.

a) Point _____ is 3 units right of and 5 units up from the origin.

b) Point _____ is 5 units right of and 3 units up from the origin.

c) Point _____ has x-coordinate 0.

d) Point _____ has y-coordinate 0.

e) Points _____ have the same x-coordinates.
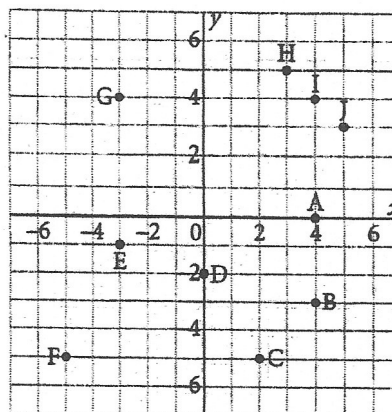
f) Points _____ and _____ have equal x- and y-coordinates.

g) Points _____ and _____ are in Quadrant 4.

**2.** Use the diagram in question 1.
Write the coordinates of each point.

a) A (4, _____)

b) B (_____, –3)

c) C _____

d) D _____

e) E _____

f) F _____

g) G _____

h) H _____

i) I _____

j) J _____

**3.** Plot these points on the grid.

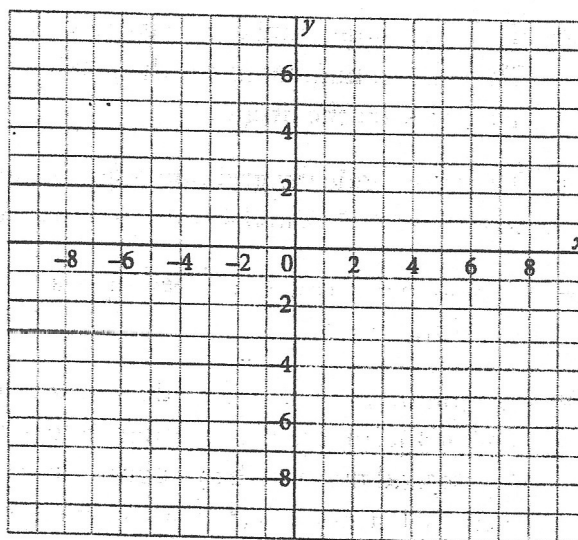$(2, -9)$, $(0, -5)$, $(-4, -7)$, $(-6, -10)$,

$(-8, -10)$, $(-9, -8)$, $(-7, 0)$, $(-5, 5)$,

$(-6, 7)$, $(-3, 6)$, $(2, 3)$, $(4, 0)$, $(8, -4)$

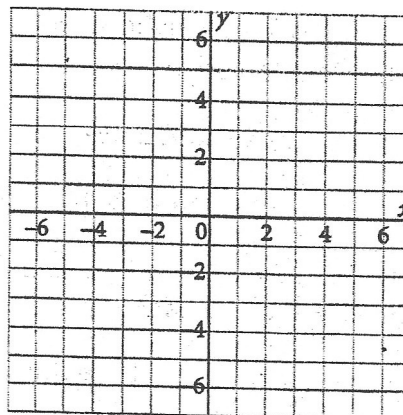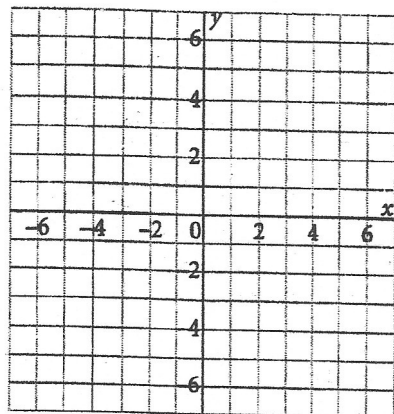Join the points in the order listed.

Which animal's head did you draw?

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**4.** Graph each set of points. Join the points in order. Then join the last point to the first point.
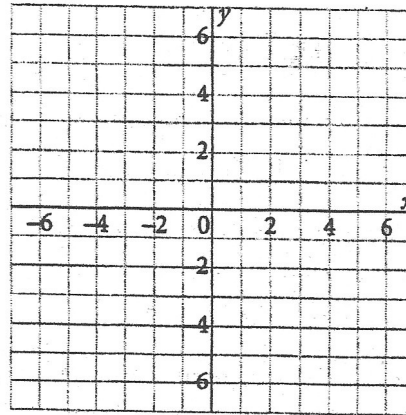Name the geometric shape you drew.

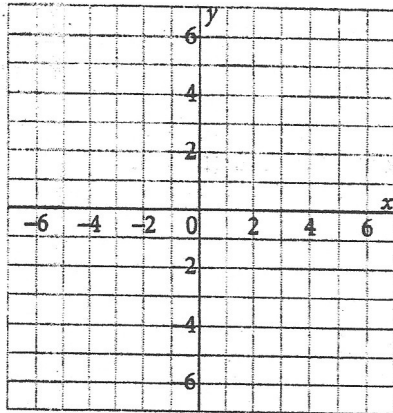a) $(5, 3)$, $(5, -3)$, $(-5, -3)$, $(-5, 3)$

b) $(-4, 0)$, $(2, 0)$, $(5, 3)$, $(-1, 3)$

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_____

c) $(-3, 4), (2, 4), (4, -2), (-4, -2)$
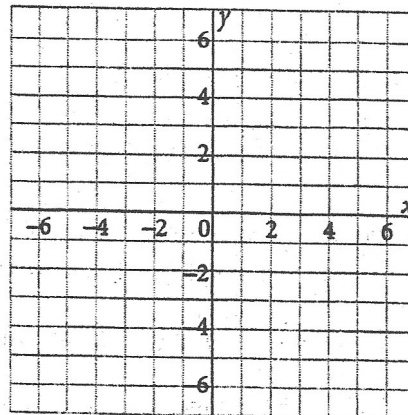
d) $(5, 1), (-2, -2), (-5, 1)$ $(2, 4)$

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_____

5. a) $A(-4, -2)$, $B(-4, 5)$, and $C(3, 5)$ are 3 vertices of square ABCD. Graph these points on the grid.

b) What are the coordinates of point D?

_____

Graph this point on the grid.
Join the points to form square ABCD.

c) Find the area and perimeter of square ABCD.

The side length of square ABCD is _____ units.

The area of square ABCD is _____ square units.

The perimeter of square ABCD is _____ units.