

Name _____

Date _____

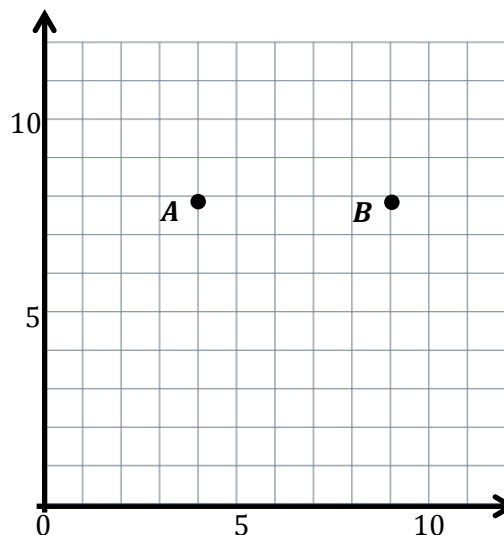
1. Use the coordinate plane to answer the questions.

- Use a straightedge to construct a line that goes through points A and B . Label the line g .
- Line g is parallel to the _____-axis and is perpendicular to the _____-axis.
- Draw two more points on line g . Name them C and D .
- Give the coordinates of each point below.

 A : _____ B : _____

 C : _____ D : _____

- What do all of the points on line g have in common?



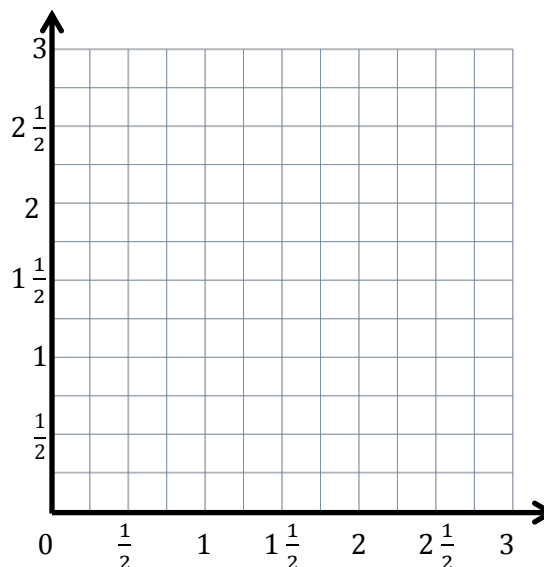
- Give the coordinates of another point that falls on line g with an x -coordinate greater than 25.

2. Plot the following points on the coordinate plane to the right.

 $H: (\frac{3}{4}, 3)$ $I: (\frac{3}{4}, 2\frac{1}{4})$
 $J: (\frac{3}{4}, \frac{1}{2})$ $K: (\frac{3}{4}, 1\frac{3}{4})$

- Use a straightedge to draw a line to connect these points. Label the line f .
- In line f , $x =$ _____ for all values of y .
- Circle the correct word:

Line f is *parallel* *perpendicular* to the x -axis.

Line f is *parallel* *perpendicular* to the y -axis.


- What pattern occurs in the coordinate pairs that make line f vertical?

3. For each pair of points below, think about the line that joins them. For which pairs is the line parallel to the x -axis? Circle your answer(s). Without plotting them, explain how you know.

a. $(3.2, 7)$ and $(5, 7)$ b. $(8, 8.4)$ and $(8, 8.8)$ c. $(6\frac{1}{2}, 12)$ and $(6.2, 11)$

4. For each pair of points below, think about the line that joins them. For which pairs is the line parallel to the y -axis? Circle your answer(s). Then, give 2 other coordinate pairs that would also fall on this line.

a. $(3.2, 8.5)$ and $(3.22, 24)$ b. $(13\frac{1}{3}, 4\frac{2}{3})$ and $(13\frac{1}{3}, 7)$ c. $(2.9, 5.4)$ and $(7.2, 5.4)$

5. Write the coordinate pairs of 3 points that can be connected to construct a line that is $5\frac{1}{2}$ units to the right of and parallel to the y -axis.

a. _____ b. _____ c. _____

6. Write the coordinate pairs of 3 points that lie on the y -axis.

a. _____ b. _____ c. _____

7. Leslie and Peggy are playing *Battleship* on axes labeled in halves. Presented in the table is a record of Peggy's guesses so far. What should she guess next? How do you know? Explain using words and pictures.

$(5, 5)$	miss
$(4, 5)$	hit
$(3\frac{1}{2}, 5)$	miss
$(4\frac{1}{2}, 5)$	miss