

3.1 Graphing a Line Parallel to an Axis

Recall: x axis is horizontal
 y axis is vertical

Equations that contain only one variable:
will be parallel to the
other lettered axis

Special Graphs:

1. $y = \#$
 - no x then the graph cannot cross the x axis.
 - parallel to the x axis (horizontal)
 - to graph — start at the given $\#$ on the y axis
2. $x = \#$
 - no y then the graph cannot cross the y axis
 - parallel to the y axis (vertical)
 - to graph → start at the given $\#$ on the x axis.

Examples:

1. Write the equation of a line that is parallel to the y -axis
and 2 units left of the y -axis.
 $x = -2$
 - ↳ doesn't cross y axis
 - ↳ no " y "
 - ↳ $x = \#$

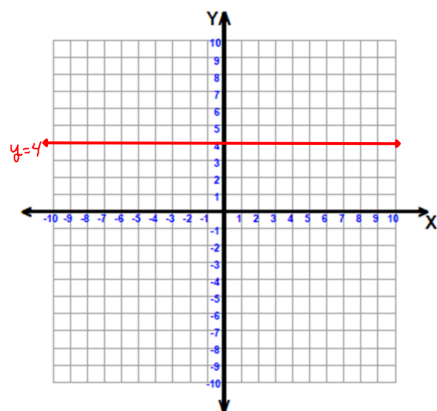
2. Write the equation of a line that is parallel to the x -axis
and 8 units above.
 $y = 8$
 - doesn't cross x axis
 - no x
 - $y = \#$

Describe fully the graph of a line whose equation is:

3. $y = 5$ no x , doesn't cross x axis, so it is parallel to x axis
 $y = 5$ is parallel to the x axis and up 5 units.
4. $x = -4$ parallel to y axis and left 4 units.
5. $y = -1$ parallel to the x axis and down 1 unit
6. $x = 7$ parallel to the y axis and right 7 units

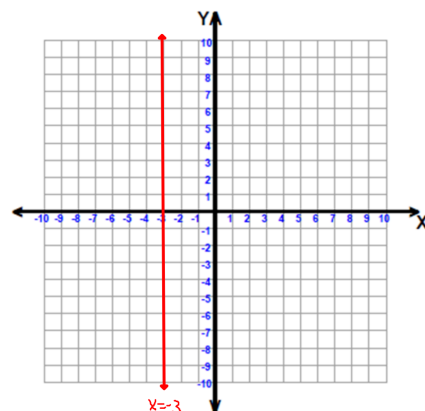
7. Graph $y = 4$

parallel to x
horizontal



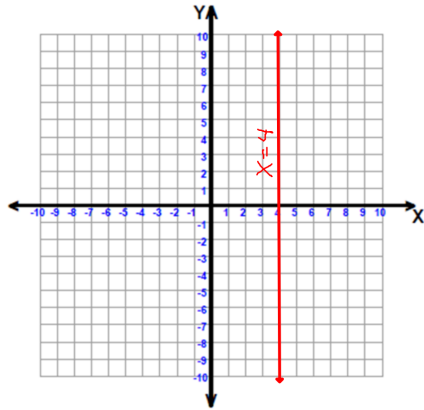
8. Graph $x = -3$

parallel to y axis
vertical



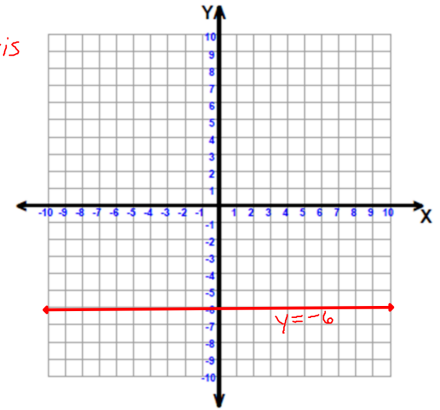
9. Graph $x = 4$

parallel to y-axis
vertical



10. Graph $y = -6$

parallel to the x-axis
horizontal



HOMEWORK

Worksheet - HW 3.1 Graphing a Line
Parallel to an Axis