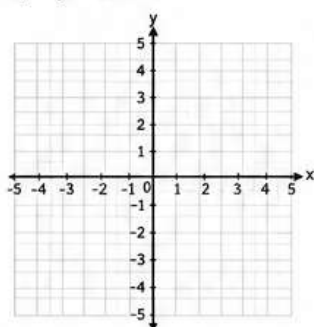


# Graphing Linear Equations Worksheet

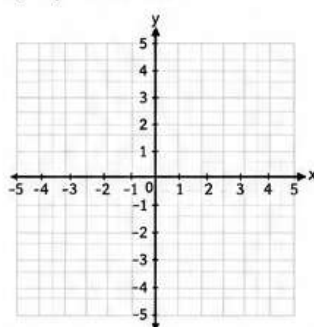
Use the given information to graph each linear equation. Show your work where needed.

1. Graph the equation using the slope and y-intercept.

a)  $y = 2x + 1$

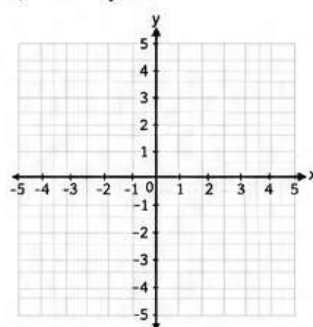


b)  $y = -3x + 4$

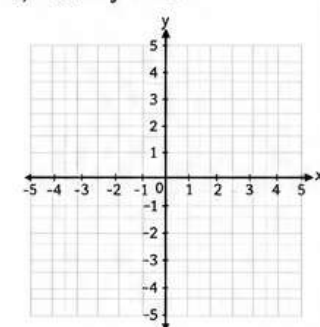


2. Graph the equation using intercepts.

a)  $x + 2y = 6$

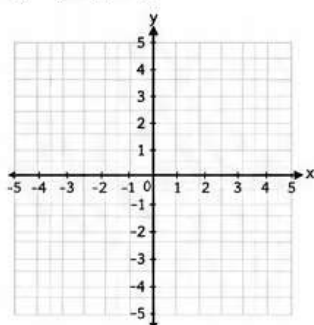


b)  $3x - y = -6$

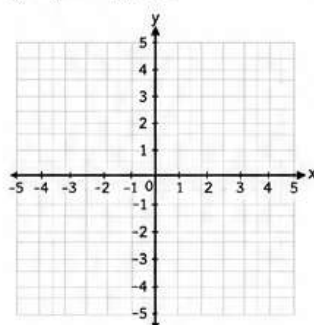


3. Graph the equation by plotting points.

a)  $y = x - 2$



b)  $y = -2x + 3$



4. Find the slope and y-intercept of each line.

a)  $y = 4x - 7$   $m = \underline{\hspace{2cm}}$   $b = \underline{\hspace{2cm}}$

b)  $y = -x + 5$   $m = \underline{\hspace{2cm}}$   $b = \underline{\hspace{2cm}}$

c)  $y = \frac{1}{2}x - 3$   $m = \underline{\hspace{2cm}}$   $b = \underline{\hspace{2cm}}$

d)  $y = -5x + 2$   $m = \underline{\hspace{2cm}}$   $b = \underline{\hspace{2cm}}$

e)  $y = 3x$   $m = \underline{\hspace{2cm}}$   $b = \underline{\hspace{2cm}}$

f)  $y = -4x - 6$   $m = \underline{\hspace{2cm}}$   $b = \underline{\hspace{2cm}}$

5. Write the equation of the line with the given slope and y-intercept.

a)  $m = 2$ ,  $b = -3$  \_\_\_\_\_

b)  $m = -\frac{1}{2}$ ,  $b = 4$  \_\_\_\_\_

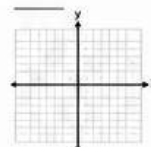
c)  $m = 5$ ,  $b = 0$  \_\_\_\_\_

d)  $m = -3$ ,  $b = -7$  \_\_\_\_\_

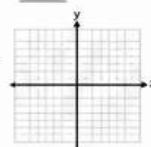
e)  $m = 0$ ,  $b = 6$  \_\_\_\_\_

6. Determine whether each equation is linear. If it is, graph it.

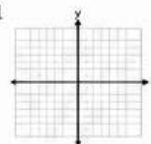
a)  $y = 3x + 2$



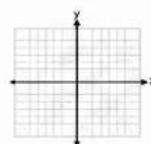
b)  $y = x^2 - 4$



c)  $y = -5x + 1$



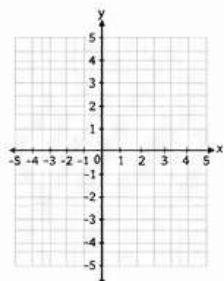
d)  $y = \frac{1}{x}$



7. Use the table of values to graph the line.

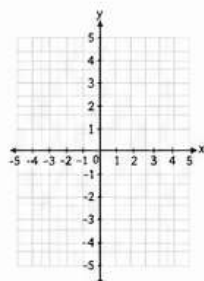
a)  $y = 2x - 1$

| x  | y  |
|----|----|
| -2 | -5 |
| -1 | -3 |
| 0  | -1 |
| 1  | 1  |
| 2  | 3  |



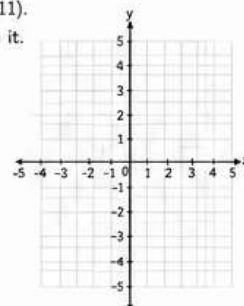
b)  $y = -x + 4$

| x  | y |
|----|---|
| -1 | 5 |
| 0  | 4 |
| 1  | 3 |
| 2  | 2 |
| 3  | 1 |



8. Real-world problems.

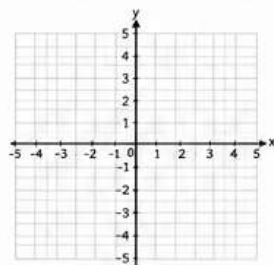
- a) A line passes through (0, 5) and (3, 11).  
Write the equation of the line. Graph it.



- b) A taxi charges a flat fee of \$3 plus \$2 per mile.  
The total cost  $C$  is a function of the number of miles  $m$ .  
Write the equation and graph it.

9. Challenge.

- a) The line passes through  $(-2, 7)$  and has a slope of  $-3$ .  
Write the equation and graph it.



- b) Find the equation of the line that is perpendicular to  $y = 4x - 1$  and passes through  $(2, -3)$ .

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