

Name : _____

1. Solve each of the following equations.

- $x + 7 = -7$
- $3x = 4x + 7$
- $\frac{1}{2}x = 3$
- $9x + 5 = 5x - 4$

2. Solve the following linear equations.

- $7 - 4x = x$
- $3(2x + 1) = 4(x + 7)$
- $\frac{3x}{4} + 3 = \frac{x}{2}$
- $\frac{x + 5}{2} + \frac{x}{5} = 10$

3. In each of the equations, solve for the indicated letter.

- $PV = RT$. Solve for V .
- $x = yz + w$. Solve for z
- $S = kAT(t_2 - t_1)$. Solve for t_1 .

4. Find the distance between the points $(2, -3)$ and $(4, 2)$.

5. Find the midpoint of the line segment joining the points $(4, -3)$ and $(6, 4)$.

6. Solve the following inequalities and graph the solution on a number line.

- $x - 3 < 0$
- $1 - 3x \geq x + 9$
- $7x - 2 < 4x + 10$
- $3 - \frac{1}{3}x > 2(x - 1)$

7. Given the equation $2x - 3y = 12$, solve for y , calculate a few points and plot the graph in Figure 1.

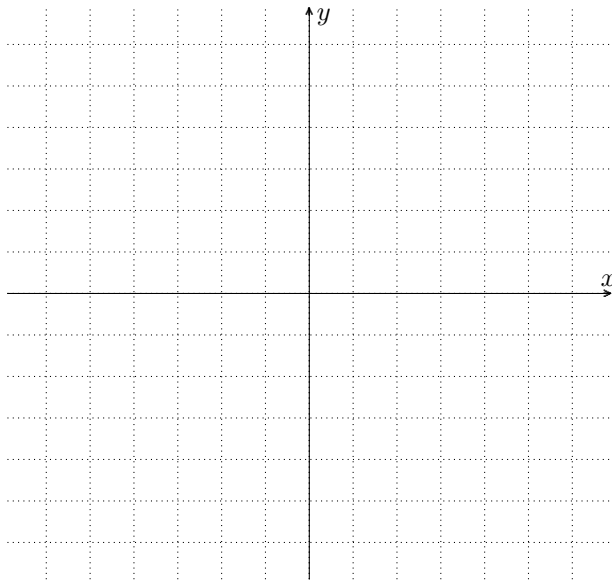


Figure 1:

8. Given the equation $2x + 6y = 12$, calculate the intercepts and plot the graph in Figure 2.

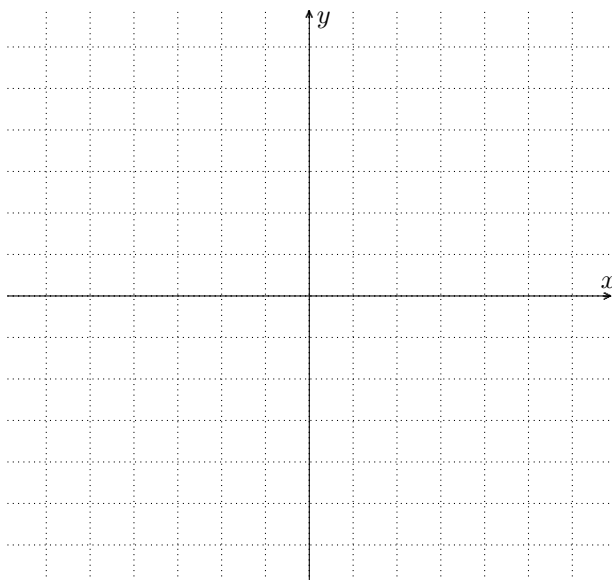


Figure 2: