

1. Combine like terms:

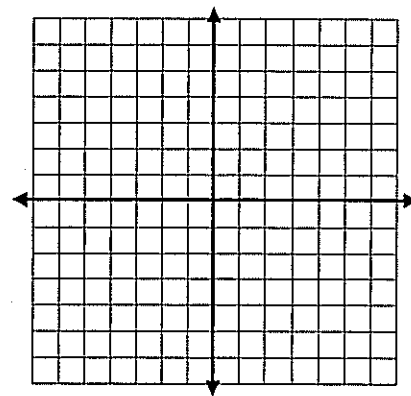
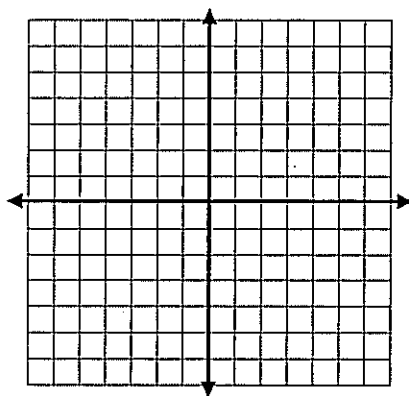
$$3(d+4) - 2(8-3d)$$

2. Calculate the slope between the points (2, 7) and (-3, 4)

3. Solve and graph your answers on a number line: $|3x-6| < 30$ 4. Find the equation of a line perpendicular to $y = \frac{2}{3}x - 2$ and passing through the point (6, 2).5. Find the x and y intercepts of the equation $2x - 3y = 6$, then graph.

6. Graph:

$$\begin{cases} x - y < 3 \\ y \leq \frac{1}{2}x - 1 \end{cases}$$

7. Simplify: $(-6a^7)(a)(2a^4)$

8. Find the y-intercept of each equation:

a) $4x - y = 5$

b) $y = 3x^2 - 2x + 30$

9. Find the x-intercepts:

$y = 3x^2 - 16x - 12$

10. Circle all the problems below that have no solution.

I. $|x-5| < -10$

II. $|x-5| > -10$

III. $|x-5| = -10$

IV. $|x-5| = 10$

11. Simplify: $\frac{x^2 y^{-4}}{4x^{-3} y^{10}}$

12. Find the vertex:

$$h = -16t^2 + 32t + 3$$

13. Describe the transformations:

$$y = -2(x-4)^2$$

14. Solve using any substitution:

$$\begin{cases} x - 4y = -5 \\ x = 2y - 4 \end{cases}$$

15. Solve and graph:

$$-2x - 5 > 9 \text{ or } 4x \geq -12$$

16. Factor:

$$9x^2 - 25$$

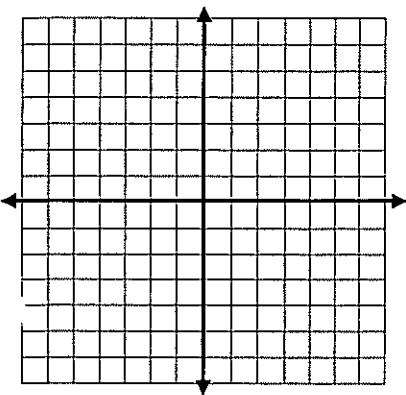
17. Multiply:

$$(3x-1)^2$$

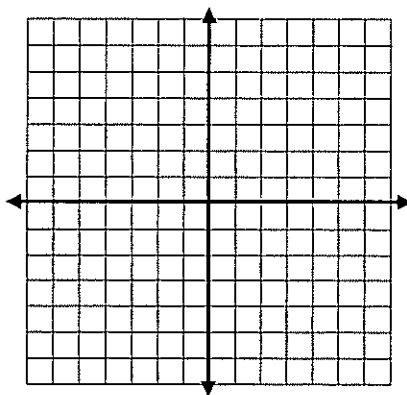
18. Find the x-intercepts.

$$y = 2x(4x-1)$$

19. Graph: $y = \frac{1}{2}x^2 + 2$



20. Graph: $3x - y = 2$



21. Subtract:

$$(3x-1) - (x^2+4x-5)$$