NAME _____

1.
Solve:

$(3x + 1)(5x - 6)$

4. Find the mistake in the problem, circle it, and then fix the work:

Joe Shmoe   **You**

$5(1 + 4h) + 2h = 27$
$5 + 20h + 2h = 27$
$$27h = 27$$
$$\frac{27h}{27} = \frac{27}{27}$$
$$h = 1$$

2.
Solve:

$$\left(n^2 - 3n - 21\right) \div \left(n - 7\right)$$

5. Find the equation of a line with a slope of -5 and a y-intercept of 4.

3. Draw a model to represent $(x + 1)^2$.

6. Which set of lines would be perpendicular?

A $y = 3x + 4$ and $y = -\frac{1}{3}x + 4$

B $y = 3x + 4$ and $y = 3x + 6$

C $y = 3x + 4$ and $y = \frac{1}{3}x + 6$

D $y = 3x + 4$ and $y = -3x + 4$

Write the polynomial solution to $(x + 1)^2$:

7. Simplify $\sqrt{16} \cdot 2\sqrt{50}$

9. Simplify:

$$\left(\frac{3x^{-3}}{x^7}\right)^{-2}$$

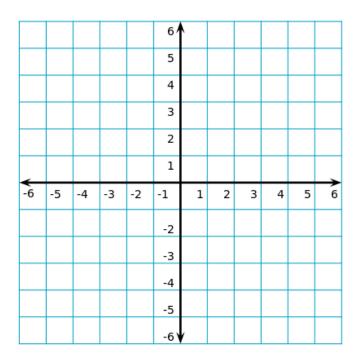10. Graph the inequality shown:
$$2y < -4x - 10$$

8. This morning, Nick processed two catering orders at the sandwich shop where he works. The first order was for 3 trays of club sandwiches and 10 trays of vegetarian sandwiches, at a cost of $130. The second order, which cost $10, was for 1 tray of vegetarian sandwiches. How much do the trays cost?

A tray of club sandwiches costs $ ⎣_____⎦ , and a tray of vegetarian sandwiches costs $ ⎣_____⎦ .