

**Algebra Review #35 SHOW HOW YOU SOLVED EACH PROBLEM**

1.  
Solve:

$$(x + 9)(2x^2 - 5x - 1)$$

2.  
Solve:

$$2(3x^2 + 6x + 3) - 4(x^2 + 8x - 1)$$

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

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

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

**Joe Shmoe**

**You**

$$-3(2x - 3) = 33$$

$$-6x + 6 = 33$$

$$\underline{-6 \quad -6}$$

$$\underline{-6x = 27}$$

$$\underline{-6 \quad -6}$$

$$x = -4.5$$

5. Find the equation of a line between the points (2,3) and (4,6).

6. Which set of lines would be parallel?

A  $y = 5x + 4$  and  $y = -\frac{1}{5}x + 4$

B  $y = 5x + 4$  and  $2y = 10x + 6$

C  $y = 5x + 4$  and  $y = \frac{1}{5}x + 6$

D  $y = 5x + 4$  and  $5y = -x + 4$

7. Simplify  $3\sqrt{27} + 3\sqrt{45}$

8. Write a system of equations to describe the situation below, solve and fill in the blanks.

An employee at a party store is assembling balloon bouquets. For a graduation party, he assembled 2 small balloon bouquets and 9 large balloon bouquets, which used a total of 192 balloons. Then, for a Father's Day celebration, he used 118 balloons to assemble 3 small balloon bouquets and 5 large balloon bouquets. How many balloons are in each bouquet?

The small balloon bouquet uses  balloons and the large one uses  balloons

9. Simplify:

$$\left(\frac{2y^2}{y^8}\right)^{-1}$$

10. Graph the inequality shown:  
 $y > x + 3$

