

Label your paper "FACTORIZING" and solve each of the following problems on your paper by factoring. Then answer the reflection questions.

1) $x^2 - 15x = -56$

2) $8x^2 - 4x = 0$

3) $3x^2 - 2x - 5 = 0$

Reflect: Why would factoring be the most efficient method for solving #1 and #2?

Would you prefer to solve #3 by a different method? If so, which one and why?

Choice 1: For each of the problems below, identify what is the most efficient method and solve each. You must use 2 different methods.

4) $4x^2 - 8x + 4 = 0$

5) $2t^2 + 3t - 11 = 0$

Label your paper "SQUARE ROOTS" and solve each of the following problems on your paper by taking the square root. Then answer the reflection question.

$$6) 6x^2 - 21 = 33$$

$$7) (x - 12)^2 - 54 = 0$$

$$8) 5(x + 4)^2 = 9$$

Reflect: Why is solving by square roots the most efficient method for solving #6-8?

Choice 2: For each of the problems below, identify what is the most efficient method and solve each. You must use 2 different methods.

$$9) x^2 - 14x - 32 = 0$$

$$10) 7x^2 + 10 = 18$$

Label your paper "COMPLETING THE SQUARE" and solve each of the following problems on your paper by completing the square. Then answer the reflection question.

$$11) x^2 + 12x = 5$$

$$12) 3p^2 - 30p - 12 = 6p$$

Reflect: What other method(s) could you use to solve these problems? What method do you think would be the most efficient for you to solve 11 and 12?

Choice 3: For each of the problems below, identify what is the most efficient method and solve each. You must use 2 different methods.

$$13) k^2 - 8k - 7 = 0$$

$$14) \frac{1}{2}(x - 8)^2 = 3$$

Choice 4: For each of the problems below, identify what is the most efficient method and solve each. You must use 2 different methods.

15) $5x^2 - 21 = 39$

16) $6x^2 + 5x + 1 = 0$