







**FACTORING:** Factor each polynomial below and write your answer in the blank.  
(Methods for factoring: GCF, Difference of Squares, and AC Methods)

\_\_\_\_\_ 25.  $4ab^2 - 24a^2b$

\_\_\_\_\_ 26.  $4x^2 - 11x - 3$

\_\_\_\_\_ 27.  $9x^2 - 4y^2$

\_\_\_\_\_ 28.  $x^2 - 11x + 18$

**EQUATION SOLVING:** Solve the equation below by factoring.

\_\_\_\_\_ 29.  $x^2 - 5x + 6 = 0$

**RADICALS:** Simplify each radical completely and write the answer in the blank. Be sure to show your work.

\_\_\_\_\_ 30.  $2\sqrt{12} - 6\sqrt{3} + 4\sqrt{27}$

\_\_\_\_\_ 31.  $(4 + \sqrt{y})^2$

\_\_\_\_\_ 32.  $\frac{2}{\sqrt{x+6}}$

**RADICAL EQUATIONS:** Solve the radical equation below and write your answer in the blank.

\_\_\_\_\_ 33.  $\sqrt{2x} - 2 = 4$

QUADRATIC EQUATIONS: Solve each quadratic equation.

\_\_\_\_\_ 34.  $(x - 1)^2 = 25$

\_\_\_\_\_ 35.  $x^2 - 2x - 28 = 0$

WORD PROBLEMS: Solve each word problem. Be sure to write your answer in terms of the question.

36. A video store charges a one-time membership fee of \$12.00 plus \$1.50 per video rental. How many videos can Stewart rent if he spends \$21?

37. Bicycle city makes custom bicycles. They charge \$160 plus \$80 for each day that it takes to build the bicycle. If you have \$480 to spend on your new bicycle, how many days can you take it to Bicycle City to build the bike?

38. Darel went to the mall and spent \$41. He bought several t-shirts that each cost \$12 and he bought 1 pair of socks for \$5. How many t-shirts did Darel buy?

39. Janet weighs 20 pounds more than Anna. If the sum of their weight is 250 pounds, how much does each girl weigh?

40. The school lunch prices are changing next year. The cost of a hot lunch will increase by \$0.45 from the current price. If next year's price is \$2.60, what did a hot lunch cost this year?