**EQUATIONS AND INEQUALITIES**

**LINEAR EQUATIONS AND INEQUALITIES**

1. 57 = 5y + 42
2. 2(x + 4) > 2x + 3
3. 2x + 9 = 11x
4. 4r – 6 = 9r + 12
5. 12t + 3 > 10t + 5
6. -3(t + 4) > -1(t – 3) + 5t
7. 3x – 5 = -17
8. 8x – 11 *<* 3x – 13

**WRITING ENGLISH PHRASES AS ALGEBRAIC EXPRESSIONS**

1. Five more than a number
2. Two less than the quotient of four and a number
3. A number increased by six
4. The quotient of six and the difference of ten and a number
5. Nine less than a number
6. The difference of three and one-half of a number
7. The product of a number squared and twenty-five
8. Twice the sum of a number and one-third of that number

**VERBAL PROBLEMS USING ONE VARIABLE**

1. Mrs. Williams’ age is twice Mark’s age, plus 12. She is 84. How old is Mark?
2. The sum of three consecutive integers is 36. Find the integers.
3. A rectangle has a length that is twice its width. If the perimeter of the rectangle is 26 inches, what are the dimensions of the rectangle?
4. The weight of a woman’s javelin is ¾ that of a man’s javelin. A javelin used by women weighs about 0.6 kilograms. What is the weight of the javelin used by men?
5. A taxi company charges $1.15 for the first mile and 15 cents for each additional 1/5 of a mile. If a taxi ride costs you $18 including a $1.70 tip, how far did you travel?
6. I have twice as many nickels as I have dimes and quarters together. I have 26 nickels and 4 dimes. How many quarters do I have?

**ABSOLUTE VALUE EQUATIONS AND INEQUALITIES AND COMPOUND INEQUALITIES**

1. 5|1 – 4x| - 15 = 0
2. |5 – 2x| > 7
3. -2|3x + 5| > -13
4. -6 < x – 4 < 1

**QUADRATIC EQUATIONS AND INEQUALITIES**

1. 4x2 – 2x = 0 (2) x + 7 < x – 2 (3) (x – 3)(x + 8) = -30
2. 2x2 + 7x – 4 = 0 (5) x2 = 8x (6) (x + 3)(x – 2) = 50

**RATIONAL EQUATIONS AND INEQUALITIES**