Name: _____   Date: _____   Period: _____

Use the following template to solve word problems.

Let Statements	**Equation**	**Solve**	**Statement/Sentence**

• Determine # of "Let" statements needed
• Write them beginning with
  Let x = _____
 	
  *See note about ratio problems
	• Set up equation USING the "Let" statements just written
	• Start with your EQUAL sign
		Solve the equation using
		• Distribute
		• Combine
		• Eliminate
			Substitute the value for x back into the "Let" statements to write your sentence answering the question being asked

*A ratio word problem is the rare occasion you won't start with "LET x =". Your "LET" statements will be written by splitting up the ratio and attaching an x to each one. Set up equation and solve.
Be careful which side you need to add/subtract to based on the wording in the problem. For example, if the problem says one side exceeds the other side by 10, you put an equal sign and ADD 10 to the SMALLER side to make them equal.

Use "Let" statements and solve each problem algebraically. Show all your work on a separate piece of paper.

1. Two numbers are in the ratio 4:3. Their sum is 70. Find the numbers.

2. A piece of wire 32 cm in length is divided into two parts that are in the ratio of 3:5. Find the length of each part.

3. The ratio of the number of boys in a school to the number of girls is 11 to 10. If there are 525 pupils in the school, how many of them are boys?

4. The perimeter of a triangle is 60 cm. If the sides are in the ratio 3:4:5, find the length of each side of the triangle.

5. Two numbers have the ratio 2:3. The larger is 30 more than one-half the smaller. Find the numbers.

6. The denominator of a fraction exceeds the numerator by 7. If 3 is subtracted from the numerator of the fraction and the denominator is unchanged, the value of the resulting fraction becomes $\frac{1}{3}$. Find the original fraction.

7. The numerator of a fraction is 8 less than the denominator of the fraction. The value of the fraction is $\frac{3}{5}$. Find the fraction.

8. Solve for x: $\dfrac{2r}{s} = \dfrac{x}{3s}$

9. The denominator of a fraction is 30 more than the numerator of the fraction. If 10 is added to the numerator of the fraction and the denominator is unchanged, the value of the fraction is $\frac{3}{5}$. Find the original fraction.

10. The larger of two numbers is 6 less than 3 times the smaller number. Three times the larger number is 7 more than 4 times the smaller number. Find the numbers.

11. Find two consecutive integers such that 3 times the larger exceeds twice the smaller by 34.

12. If 13 is added to a number and the sum is multiplied by 3, the result is 9 less than 7 times the number. Find the number.