Name: Date: Period:

PLEASE DON'T SQUEEZE!! Solve ALL problems ALGEBRAICALLY using the template to set up.

DEFINE your Variable(s)	**Write your Equation then solve it**	**Statement/Sentence**

1. The width of a rectangle is 2 m less than the length. The area is 48 m^2. Find the dimensions.

2. The sum of the squares of two consecutive even integers is 452. Find the integers.

3. The dimensions of a rectangular garden were 4m by 5m.   Each dimension was increased by the same amount. The garden then had an area of 56 m^2. Find the dimensions of the new garden.

4. Michelle is 5 years younger than Cindy. Janet is 10 years less than twice Cindy's age. Kenny is 10 years old. The ratio of Janet's age to Cindy's age equals the ratio of Michelle's age to Kenny's age. How old are Cindy, Michelle, and Janet?

5. When the square of a certain number is diminished by 9 times the number, the result is 36. Find the number.

6. Albert's rectangular vegetable garden is 6 feet long and 3 feet wide. He wants to lengthen the dimensions by the same number of feet so that the total area of the new garden will be 40 square feet. What will be the dimensions of the enlarged garden?

7. The square of a number decreased by 15 is equal to twice the number. Find the number.

8. The square of a certain number decreased by 4 times the number equals 21. Find the number.

9. The product of 2 positive consecutive even integers is 80. Find the integers.

10. A ball is thrown upward from ground level. The height of the ball from the ground is given by the quadratic equation h = -16t^2 + 64t where h is the height of the ball in feet and t is the number of seconds since the ball was thrown. How many seconds will it take for the ball to reach the ground after it has been thrown upward?

11. A 4m by 6m rug covers half of the floor area of a room and leave a uniform strip of bare floor around the edges. What are the dimensions of the room?