

QUADRATIC EQUATIONS

word problems

NUMBERS

1 The product of two consecutive positive numbers is 132. Find the numbers.

2 The sum of a number and its square is 72. Find the number.

3 If we square a number, we get six times the number. Find all numbers with this property.

4 If we raise a number to the third power, we get four times the number. Find all numbers with this property.

5 Is it possible to find real numbers whose sum is 10 and product is 30? and with a sum 30 and a product 10?

6 The product of two consecutive even integers is 840. Find these numbers.

7 The sum of the squares of two consecutive even real numbers is 52. Find these numbers.

8 The product of two numbers is 65. Their difference is 8. Find these numbers.

RECTANGLES

9 The length of a rectangle is three more than twice the width. Determine the dimensions that will give a total area of 27 m^2 .

BONUS QUESTION What is the minimum area that this rectangle can have?

10 A square and a rectangle have the same area. The length of the rectangle is five inches more than twice the length of the side of the square. The width of the rectangle is 6 inches less than the side of the square. Find the length of the side of the square.

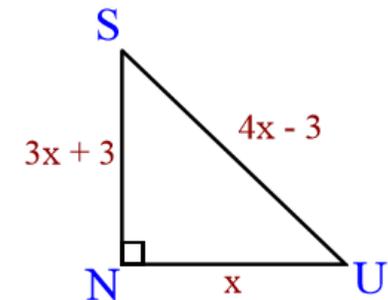
11 The perimeter of a rectangle is 30 cm. Its area is 54 cm^2 . Find the dimensions of this rectangle.

12 Mr T had a rectangular shaped garden where the length was 2 less than twice the width. If the area of the garden was 420 square feet, find the dimensions of the garden.

13 A garden measuring 12 meters by 16 meters is to have a regular pedestrian pathway installed all around it, increasing the total area to 285 square meters. What will be the width of the pathway?

GEOMETRY

14 Use the following diagram to solve for the length of all three sides in the triangle SUN.



15 Three circles touch each others as shown. Triangle ABC is right-angled in A and the circles centered B and C have respective radii 2 and 5. What is the radius of the circle with center A?

