

Algebra II Worksheet #9 Unit 6 page 1 _____

Write a second degree equation in one variable to solve each of the following problems. Express irrational solutions rounded to the nearest tenth. (Many of these problems have two solutions.) Show your work and your solutions neatly organized.

1. One number is 5 less than another. Their product is -6. What are the numbers?

2. One number is one less than two times another. Their product is 3. Find the numbers.

3. The sum of a number and its square is 8. What is the number?

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Write a second degree equation in one variable to solve each of the following problems. Express irrational solutions rounded to the nearest tenth. (Many of these problems have two solutions.) Show your work and your solutions neatly organized.

4. The area of a rectangle is 35 square inches. Find its dimensions if its length is 2 inches longer than its width.

5. The area of a rectangle is 10 square inches. Find its dimensions if its length is 3 times its width.

6. The area of a rectangle is 12 square inches. Find its dimensions if its length is 2 inches more than its width.

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Write a second degree equation in one variable to solve each of the following problems. Express irrational solutions rounded to the nearest tenth. (Many of these problems have two solutions.) Show your work and your solutions neatly organized.

7. The length of one leg of a right triangle is 2 inches more than the length of the other leg. The length of the hypotenuse is 4 inches more than the length of the shorter leg. How long is each side of the triangle.

8. The product of two consecutive odd integers is 195. Find the integers.

9. Find the dimensions of a rug that covers 68% of the floor of a room that is 20 feet long and 15 feet wide if the edges of the rug are equidistant from the walls.