

A.A.8: Geometric Applications of Quadratics 2: Analyze and solve verbal problems that involve quadratic equations

- 1 Two floors, each square in form and one 7 feet wider than the other, contain together 1429 square feet. How many square feet in each?
- 2 The distance around a rectangular field is 100 rods; the area is 589 square rods. Find the length and breadth of the field.
- 3 The area of a rectangle is 48 sq. ft. Its perimeter (sum of its sides) is 32 feet. Find its length and width.
- 4 The length of a rectangular field is three times its width, and the number of square rods in its area is $7\frac{1}{2}$ times the number of rods around the field. Find its length and width.
- 5 The length of a certain rectangle is to its width as 8 to 5 and the number of square feet in its area is equal to the number of linear feet in its perimeter less three. Find its length and width.
- 6 The length of a floor exceeds its width by 2 feet. If each dimension is increased 2 feet the area of the floor will be increased 48 square feet. Find the dimensions of the floor.
- 7 The perimeter of a rectangular lot is 220 feet and its area is 2925 square feet. Find its length and breadth.
- 8 A rectangular yard is 20 rods longer than it is wide. Its area is 2400 square rods. Find the dimensions of the yard.
- 9 If the sides of an equilateral triangle are increased by 7 inches, 4 inches and 1 inch respectively, a right triangle is formed. Find the length of a side of the equilateral triangle.

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1 ANS:
529 and 900

PTS: 2 REF: 019112al

2 ANS:
31 and 19

PTS: 2 REF: 069112al

3 ANS:
4 and 12

PTS: 10 REF: 019402al

4 ANS:
60 and 20

PTS: 10 REF: 039411al

5 ANS:
4 and 2.5 or 1.2 and 0.75

PTS: 10 REF: 019512al

6 ANS:
width = 10 and length = 12

PTS: 10 REF: 019815al

7 ANS:
45 and 65

PTS: 10 REF: 039815al

8 ANS:
40 and 60

PTS: 12 REF: 030506al

9 ANS:
8

PTS: 12 REF: 060510al