

12.6

Solving Problems Involving Quadratic Equations

Solve.

- 1) The length of a rectangular table is 5 inches more than twice its width. Its area is 1950 in^2 . Find the dimensions.

Solve.

- 2) The sum of a number and its square is 156. Find the number.

Solve.

- 3) The altitude of a triangle is 9 cm less than the base. The area is 143 cm^2 . What are the altitude and the base?

Solve.

- 4) If the side of square is increased by 3 meters, its area is 121 m². Find the length of a side of the original square.

Solve.

- 5) One work crew can finish a job in 18 hours less than a second crew. Working together, they can finish the job in 40 hours. How long would each crew take working alone?

	<i>Work Rate X Time = Work Done</i>		
1 st Crew			
2 nd Crew			

$$\boxed{\begin{array}{l} 1^{\text{st}} \text{ Crew's} \\ \text{Part of Job} \end{array}} + \boxed{\begin{array}{l} 2^{\text{nd}} \text{ Crew's} \\ \text{Part of Job} \end{array}} = \boxed{\begin{array}{l} \text{Whole} \\ \text{Job} \end{array}}$$

Solve.

- 5) One work crew can finish a job in 18 hours less than a second crew. Working together, they can finish the job in 40 hours. How long would each crew take working alone?