Quadratic Applications

Write an equation for each situation. Solve and graph. Write the equation in factored form.

1) The product of two integers is 28. The difference between them is 3. What are the two numbers?	2) The product of two consecutive even integers is 48. What are the numbers?	3) Find three consecutive integers if the product of the first two if 20 more than 4 times the third.
4) The product of two integers is 45. The difference between the integers is four. What are the two numbers?	5) Two numbers have a sum of 18 and a product of 72. Find the numbers.	6) Find three consecutive odd integers if the product of the smallest and biggest is 13 less than 10 times the other..
7) The product of two consecutive multiples of 4 is 96. What are the two numbers?	8) The area of a rectangle is 264 sq. ft. The base is 13 ft greater than the height. What are the base and height?	9) Two numbers have a sum of 36 and a product of 315. Find the numbers.
10) The sum of two numbers is 46. Their product is 504. Find the numbers.	11) The product of two number is 153. The difference between the numbers is 8. What are the two numbers?	12) A rectangular tile design on a floor in a museum has a length 6 feet greater than it's width. The area of the design is 216 ft^2. What are the dimensions of the design?
13) The area of a rectangular garden is 1,204 ft^2. The width is 15 ft greater the height. What are the dimentions of the garden?	14) The fence around a rectangular corral has a length of 120 ft. The area of the corral is 836 ft^2. What are the dimensions of the corral?	15) One side of a triangle is 3 feet longer than another side and half the length of the third side. The product of the two shorter sides is three times the long side. What are the lengths of the sides?
16) A rectangular playground in the water on a beach is roped off. The length of the rope is 200 ft. The area of the playground is 2,436 ft^2. What are the dimensions of the playground?	17) Orem city wants to build an Olympic sized swimming pool. The length will be 82 feet greater than the width. The area will be 13,448 sq ft. What are the dimensions of the pool?	18) A triangular roof truss has an area of 50 ft^2. The base is 4 times the height. What are the base and height?
19) A triangular sheet of glass has area 30 ft^2. The base is 4 ft shorter then the height. Find the base and height.	20) A rectangular crime scene is closed off with hazard tape. The enclosed area is 1,216 ft^2. The length of the tape is 140 feet. Give the dimensions of the scene.	21) The sides of a triangle are consecutive multiples of 3.The product of the longest and shortest sides is 9 less than 15 times the medium side. What are the lengths of the sides?