

Name: _____

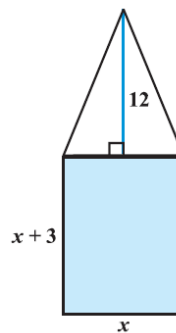
Quadratic Equations

1) An object is thrown upward. Its equation is given by height $y = -16t^2 + 64t + 80$, y in feet, t =time in seconds

- 1) Find the height after 2 seconds
- 2) When is the object 128ft high?
- 3) When does it hit the ground?

2) Find two consecutive positive integers, sum of whose squares is 365.

3) A rectangular park is to be designed whose width is 3 m less than its length. Its area is to be 4 square meters more than the area of a park in the shape of an isosceles triangle with its rectangular park and of altitude 12 m. find its length and width.



4) Is the following situation possible? If so, determine their present ages. The sum of the ages of two friends is 20 years. Four years ago, the product of their ages in years was 48.

5) Is it possible to design a rectangular mango grove whose length is twice its width, and the area is 800 m^2 ? If so, find its length and width.

- 6) Sum of the areas of two squares is 468 m^2 . If the difference of their perimeters is 24 m, find the sides of the two squares.
- 7) Is it possible to design a rectangular park of perimeter 80 m and area 400 m^2 ? If so, find its length and width.
- 8) The diagonal of a rectangular field is 60 meters more than the shorter side. If the longer side is 30 meters more than the shorter side, find the sides of the field.
- 9) The difference of squares of two numbers is 180. The square of the smaller number is 8 times the larger number. Find the two numbers.
- 10) In a class test, the sum of Stefani's marks in Mathematics and English is 30. Had she got 2 marks more in Mathematics and 3 marks less in English, the product of their marks would have been 210. Find her marks in the two subjects.