

Math 12
Vogler
Transforming Word Problems into Equations

- 1.) A rectangle with length x and width y has a perimeter of 20 ft. Write its area as a function of x .
- 2.) A rectangle with length x and width y has an area of 100 ft^2 . Write its perimeter as a function of x .
- 3.) A right triangle has height 3. Write the area of the triangle as a function of its hypotenuse x .
- 4.) Let x and y be two numbers whose sum is 100. Write the sum of the squares of the numbers as a function of x .
- 5.) A rectangular 100 ft pen is build against a wall (i.e. one side is the wall and doesn't require fencing). The two sides with equal lengths, y , cost \$10/ft to fence and the third side, x , (parallel to wall) cost \$25/ft to fence. Write the total cost of the fence as a function of the third length x .
- 6.) A closed rectangular box has a square base and volume of 16 ft^3 . Write the outer surface area of the box as a function of height h .
- 7.) The volume of an open cylindrical can is $9\pi \text{ in}^3$. Write the outer surface area of the can as a function of its base radius r .