

### 3.6 Applications: Number Problems and Consecutive Integers

Read each problem carefully, translate the various phrases into algebraic expression, set up an equation, and solve the equation

- 1) Three less than twice a number is equal to the number, what is the number?
  
  
  
  
  
  
  
  
  
  
- 2) The difference between twice a number and 3 is equal to 6 decreased by the number. Find the number.
  
  
  
  
  
  
  
  
  
  
- 3) Two added to the quotient of a number and 7 is equal to -3. What is the number?
  
  
  
  
  
  
  
  
  
  
- 4) The length of a wire is bent to form a triangle with 2 equal sides. The wire is 26 inches long and the base is 5 inches longer than each equal side. What are the dimensions of the triangle?

### Consecutive Integers Word Problems

#### Consecutive Integers

First:  $x$

Second:  $x + 1$

Third:  $x + 2$

Fourth:  $x + 3$

Fifth:  $x + 4$

#### Consecutive Even or Odd

First:  $x$

Second:  $x + 2$

Third:  $x + 4$

Fourth:  $x + 6$

Fifth:  $x + 8$

1. The sum of three consecutive integers is 147. Find the integers.
2. The sum of three consecutive odd integers is -3. Find the integers.
3. Find three consecutive integers such that the sum of the first and third is 76 less than three times the second.
4. Find three consecutive integers such that eight more than twice the third is 34.

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