

**Review Equations!**

 **SOLVE EACH PROBLEM.**

1. The lengths of the sides of a triangle are in the ratio 2:3:4, and the perimeter of the triangle is 36 inches. Determine the length of each side. Support your answer.
  
  
  
  
  
  
  
  
  
  
  
2. In a game of basketball, you make some three-point shots and some two-point shots. You made five times as many two-point shots as three-point shots, and earned a total of 52 points! How many of each type of shot did you make? Explain why.
  
  
  
  
  
  
  
  
  
  
  
3. Ed Sheeran is performing at a benefit concert, for which most of the proceeds will be given to charity. Ed is going to give the charity \$3,500 of his own money, plus 85% of all of the ticket sales.
  - a. How much money must be made in ticket sales in order for the total donation to be at least \$20,000?
  - b. Assuming the concert venue holds 800 people and is expected to sell out, what would be a reasonable price for any given ticket? Support your answer.

**☞ SOLVE EACH EQUATION.**

1.  $2b - 9 = 51$

2.  $3h + 2 = -2h - 7$

3.  $-2(x + 9) = 8x - 4$

4.  $-3 + 7(3x - 1) = -4(-3 + 3x) - 2x$

5.  $-5n - 3n = -5(n + 3) - 4(n - 1)$

6.  $3v - 12 = 3(2v + 10)$

**☞ ISOLATE THE DESIRED VARIABLE IN EACH EQUATION. BE SURE TO STATE ANY RESTRICTIONS.**

1. desired: length ( $l$ )

$$P = 2l + 2w$$

2. desired: principal ( $p$ )

$$\text{Interest} = p * \text{rate} * \text{time}$$

3. desired:  $q$

$$3q/9 = (9 + r)/s$$

4. desired:  $m$

$$n/m = r/p$$

Selected Solutions:

1. 8 inches, 12 inches, and 16 inches

3a. \$19,411.77

1.  $b = 30$

3.  $x = 11/3$  or 3.66...

5.  $n = -11$

1. length =  $P/2 - w$   
 $P > 0$  and  $w > 0$

3.  $q = (63 + 9r) / 3s$   
 $= (21 + 3r) / s$

$s$  cannot equal 0