

Math 70 Quiz #5 Solutions

1. $2[3t + 4(t - 1)] = 2[3t + 4t - 4]$ (Distributing inside the inner parentheses first.)
 $= 2[7t - 4]$ (Combining like terms)
 $= 14t - 8$ (Distributing inside the brackets.)

2. Plugging in $x = 2$: $3(2)^2 - 1 = 3(4) - 1$
 $= 12 - 1$
 $= 11$

3. To determine if $x = -3$ is a solution, we need to evaluate the equation at $x = -3$ and see if both sides of the equation are equal.
 \Rightarrow Left-side of equation: $5 + (-3) = 2$
Right-side of equation: -2 These are not equal!!

So, $x = -3$ is not a solution of the equation.

4. To determine if $x = 5$ is a solution, we need to evaluate the equation at $x = 5$ and see if both sides of the equation are equal.
 \Rightarrow Left-side of equation: $7 + 2 = 9$
Right-side of equation: $5 + 4 = 9$ These are equal!!

So, $x = 5$ is a solution of the equation.

5. The area of the sail is $A = \frac{1}{2}(10)(12) = \frac{120}{2} = 60$ square feet. ($a = 10$, $b = 12$)

So, the total cost of the fabric is given by $\text{Cost} = 60(3) = 180$ dollars.