

1) Answer: A

Explanation: To find the value of x in $x - 9 = 21$, we should isolate x from other quantities. To achieve this, we transpose $- 9$ to the right-hand side of the equation.

$$x - 9 = 21$$

$$x = 9 + 21$$

$$x = 30$$

Transposition Method

The answer is 30.

2) Answer: B

Explanation: Since we have a quantity multiplied to the sum of addends (or in this case, a difference), we can apply the distributive property.

Applying the distributive property and solving for x :

$$2(x - 3) = - 4$$

$$2(x) - 2(3) = - 4$$

$$2x - 6 = - 4$$

$$2x = 6 - 4$$

$$2x = 2$$

$$\frac{2x}{2} = \frac{2}{2}$$

$$x = 1$$

Distributive Property

Transposition Method

Division Property of Equality

3) Answer: D

Explanation: Let x be the number, then $2x$ represents twice of it. Since when the number is increased by 2, the result will be twice of that number, we have this equation:

$$x + 2 = 2x$$

Now, let us solve for x in the linear equation we have derived above.

$$x - 2x = -2$$

Transposition Method

$$-x = -2$$

$$\frac{-x}{-1} = \frac{-2}{-1}$$

Division Property of Equality

$$x = 2$$

Therefore, the unknown number in the problem is 2.

4) Answer: A**Explanation:**

$$3x - 10 = 17$$

$$3x = 10 + 17$$

Transposing -10 to the right-hand side

$$3x = 27$$

$$\frac{3x}{3} = \frac{27}{3}$$

Dividing both sides by 3

$$x = 9$$

The answer is 9.

5) Answer: C

Explanation: The first thing we have to do is to “remove” the denominators by multiplying both sides of the equation by the LCD.

The LCD of 9 and 1 is 9. Hence, we multiply both sides of the equation by 9:

$$\frac{2+x}{9} = 1$$

$$9\left(\frac{2+x}{9}\right) = 9(1)$$



Answer Key

Linear Equations

$$2 + x = 9$$

$$x = - 2 + 9$$

$$x = 7$$

Transposition Method

The answer is $x = 7$.



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