Possible Solutions

What value of x makes this equation true?

$$\frac{3}{4}x - 4 = \frac{1}{2}x + 8$$

Possible Solution 1

- Start by collecting the variables on the left hand side of the equation by subtracting $\frac{1}{2}x$ from both sides of the equation.
- Then, add 4 to both sides of the equation.
- Divide both sides of the equation by $\frac{1}{4}$.
- It is important to check your answer. When substituting the answer back into the equation, both sides of the equation should have the same value.
- The solution is $x = 48$.

$$\frac{3}{4}x - 4 = \frac{1}{2}x + 8$$

$$\frac{1}{4}x - 4 = 8$$

$$\frac{1}{4}x = 12$$

$$x = 48$$

Possible Solution 2

- Start by multiplying every term by 4 to find the least common denominator.
- Next, subtract $2x$ from both sides of the equation.
- Then, add 16 to both sides of the equation.

- It is important to check your answer. When substituting the answer back into the equation, both sides of the equation should have the same value.
- The solution is $x = 48$.

$$\frac{3}{4}x - 4 = \frac{1}{2}x + 8$$

$$3x - 16 = 2x + 32$$

$$x - 16 = 32$$

$$x = 48$$