

Exercises A.6.29 and 31 Solve each equation:

$$\text{A.6.29 } \frac{1}{2}x - 4 = \frac{3}{4}x \quad \text{A.6.31 } 0.9t = 0.4 + 0.1t$$

A.6.29 Solution

We have $\frac{1}{2}x - 4 = \frac{3}{4}x$ or

$$\left(\frac{1}{2}x - 4\right) - \frac{1}{2}x = \left(\frac{3}{4}x\right) - \frac{1}{2}x \quad \text{or} \quad -4 = \frac{1}{4}x.$$

So $4(-4) = 4\left(\frac{1}{4}x\right)$ or $-16 = x$ and

$x = -16$ so that the solution set is $\{-16\}$. \square

A.6.31 Solution

We have $0.9t = 0.4 + 0.1t$ or

$$(0.9t) - 0.1t = (0.4 + 0.1t) - 0.1t \quad \text{or}$$

$$0.8t = 0.4. \quad \text{So } (0.8t)/(0.8) = (0.4)/(0.8)$$

or $t = 1/2$ and the solution set is $\{1/2\}$. \square