

## Review Exercise Set 7

Exercise 1: Solve.

$$13 - 3m = -7m + 31$$

Exercise 2: Solve.

$$10m = 2m + 56$$

Exercise 3: Solve.

$$\text{If } 3 - 5c = 4 - 4c, \text{ evaluate } 2c^2 - 3c + 6$$

Exercise 4: Solve.

$$\frac{3}{4}b + \frac{5}{12} = \frac{1}{6}$$

Exercise 5: Solve.

$$3[6 - 4(w + 3)] = -2(5w - 7)$$

## Review Exercise Set 7 Answer Key

Exercise 1: Solve.

$$\begin{aligned}13 - 3m &= -7m + 31 \\13 - 3m + 7m &= -7m + 7m + 31 \\13 + 4m &= 31 \\13 - 13 + 4m &= 31 - 13 \\4m &= 18 \\4m \div 4 &= 18 \div 4 \\m &= 4\frac{2}{4} \\m &= 4\frac{1}{2}\end{aligned}$$

Exercise 2: Solve.

$$\begin{aligned}10m &= 2m + 56 \\10m - 2m &= 2m - 2m + 56 \\8m &= 56 \\8m \div 8 &= 56 \div 8 \\m &= 7\end{aligned}$$

Exercise 3: Solve.

If  $3 - 5c = 4 - 4c$ , evaluate  $2c^2 - 3c + 6$

First, we need to solve  $3 - 5c = 4 - 4c$  for  $c$ .

$$\begin{aligned}3 - 5c &= 4 - 4c \\3 - 5c + 5c &= 4 - 4c + 5c \\3 &= 4 + c \\3 - 4 &= 4 - 4 + c \\-1 &= c\end{aligned}$$

Now, we can substitute this value into  $2c^2 - 3c + 6$  for  $c$

$$\begin{aligned}2c^2 - 3c + 6 & \\= 2(-1)^2 - 3(-1) + 6 & \\= 2(1) + 3 + 6 & \\= 2 + 9 & \\= 11 &\end{aligned}$$

Exercise 4: Solve.

$$\begin{aligned}\frac{3}{4}b + \frac{5}{12} &= \frac{1}{6} \\ 12 \times \left(\frac{3}{4}b\right) + 12 \times \left(\frac{5}{12}\right) &= 12 \times \left(\frac{1}{6}\right) \\ 3 \times (3b) + 1 \times (5) &= 2 \times (1) \\ 9b + 5 &= 2 \\ 9b + 5 - 5 &= 2 - 5 \\ 9b &= -3 \\ 9b \div 9 &= -3 \div 9 \\ b &= -\frac{1}{3}\end{aligned}$$

Exercise 5: Solve.

$$\begin{aligned}3[6 - 4(w + 3)] &= -2(5w - 7) \\ 3(6 - 4w - 12) &= -2(5w - 7) \\ 3(-4w - 6) &= -2(5w - 7) \\ -12w - 18 &= -10w + 14 \\ -12w + 10w - 18 &= -10w + 10w + 14 \\ -2w - 18 &= 14 \\ -2w - 18 + 18 &= 14 + 18 \\ -2w &= 32 \\ -2w \div -2 &= 32 \div -2 \\ \mathbf{w} &= \mathbf{-16}\end{aligned}$$