Review Exercise Set 5

Exercise 1: Is 5 a solution of $3y - 4 = 2y$?

Exercise 2: Solve.

$$5m + 1 = 10m - 3$$

Exercise 3: Solve.

$$d + 1.36 = 4.69$$

Exercise 4: Solve.

$$\frac{-m}{3} + \frac{4}{9} = -\frac{2}{9}$$

Exercise 5: Solve.

$$\frac{3}{4}x = -\frac{9}{20}$$
Exercise 1: Is 5 a solution of $3y - 4 = 2y$?

\[
3y - 4 = 2y \\
3(5) - 4 = 2(5) \\
15 - 4 = 10 \\
11 = 10 \text{ False}
\]

5 is not a solution since it produces a false statement

Exercise 2: Solve.

\[
5m + 1 = 10m - 3 \\
5m - 5m + 1 = 10m - 5m - 3 \\
1 = 5m - 3 \\
1 + 3 = 5m - 3 + 3 \\
4 = 5m \\
4 \div 5 = 5m \div 5 \\
\frac{4}{5} = m
\]

Exercise 3: Solve.

\[
d + 1.36 = 4.69 \\
d + 1.36 - 1.36 = 4.69 - 1.36 \\
d = 3.33
\]

Exercise 4: Solve.

\[
\frac{-m}{3} + \frac{4}{9} = -\frac{2}{9}
\]

Multiply each fraction by the LCD

\[
9\times\left(\frac{-m}{3}\right) + 9\times\left(\frac{4}{9}\right) = 9\times\left(-\frac{2}{9}\right)
\]

Divide the denominators into the LCD

\[
3\times(-m) + 1\times(4) = 1\times(-2)
\]

Multiply

\[-3m + 4 = -2\]
Subtract 4 from each side to isolate the variable term

\[-3m + 4 - 4 = -2 - 4\]
\[-3m = -6\]

Divide both sides by -3 to solve for m

\[-3m ÷ -3 = -6 ÷ -3\]
\[m = 2\]

Exercise 5: Solve.

\[\frac{3}{4}x = -\frac{9}{20}\]

\[20 \times \left(\frac{3}{4}x\right) = 20 \times \left(-\frac{9}{20}\right)\]

\[5 \times (3x) = 1 \times (-9)\]

\[15x = -9\]

\[x = \frac{-9}{15}\]

\[x = \frac{-3}{5}\]