

Solve each equation. Show your steps.

1. $11 + \frac{P}{2} = -3$

2. $18 - 2(w + 5) - 3w = 13$

3. $7Q - 4 + 2Q = 13 - Q + 11$

4. $\frac{7}{12} + \frac{5}{6}M = \frac{11}{6}$

Answers

1. $11 + \frac{P}{2} = -3$
-11 -11

$$2 \cdot \frac{P}{2} = -14 \cdot 2$$

$$P = -28$$

2. $18 - 2(w + 5) - 3w = 13$

$$18 - 2w - 10 - 3w = 13$$

$$8 - 5w = 13$$

$$\frac{-5w}{-5} = \frac{5}{-5}$$

$$w = -1$$

3. $7Q - 4 + 2Q = 13 - Q + 11$

$$9Q - 4 = 13 - Q + 11$$

$$9Q - 4 = 24 - Q$$

$$10Q - 4 = 24 \rightarrow \frac{10Q}{10} = \frac{28}{10}$$

$$Q = 2.8$$

4. $\frac{7}{12} + \frac{5}{6}M = \frac{11}{6}$

$$\frac{7}{12} + \frac{2}{2} \cdot \frac{5}{6}M = \frac{11}{6} \cdot \frac{2}{2}$$

$$\frac{7}{12} + \frac{10}{12}M = \frac{22}{12}$$

$$7 + 10M = 22$$

$$-7 -7$$

$$10M = 15$$

$$M = 1.5$$