

Warm up: justify each step shown with a number property.

$$3m + 6 - 8m + 9 = -20 \text{ if } m = 7$$

$$1) 3m - 8m + 6 + 9 = -20$$

$$2) 3m - 8m + 15 = -20$$

$$3) m(3-8) + 15 = -20$$

$$4) m(-5) + 15 = -20$$

$$5) -5m + 15 = -20$$

$$6) -5m + 15 - 15 = -20 - 15$$

$$7) -5m + 15 - 15 = -35$$

$$8) -5m = -35$$

$$9) \frac{-5m}{-5} = \frac{-35}{-5}$$

$$10) \frac{-5m}{-5} = 7$$

$$11) \boxed{m = 7}$$

Examples

$$1. \begin{array}{r} 13.7 + 3.2 = 13.7 \\ + 3.2 \\ \hline 16.9 \end{array}$$

$$2. \begin{array}{r} 9.8 - 7.1 = 2.7 \\ 9.8 + (-7.1) \end{array}$$

$$5) \begin{array}{r} -7.1 + 3.63 = -3.47 \\ -7.10 \\ + 3.63 \\ \hline -3.47 \end{array}$$

$$3) \begin{array}{r} 2.9 - 9.4 = \\ 2.9 + (-9.4) = 9.4 \\ - 2.9 \\ \hline -6.5 \end{array}$$

$$4) \begin{array}{r} -10.9 + 6.1 = 10.9 \\ - 6.1 \\ \hline -4.8 \end{array}$$