

*Big Ideas

Try It 1-2

Ex. 1:

same as -1

because $2z \neq 1$

integer subtraction rule is add the opposite or "add a line change the sign"

$$\begin{array}{r|l} 2z + 1 = -5 & \\ \cancel{2z} + 1 & +1 \\ \hline \cancel{2z} & -4 \\ \hline & \frac{-4}{2} \\ \hline & z = -2 \end{array}$$

$$\begin{array}{r|l} -3z + 1 = 7 & \\ \cancel{-3z} + 1 & -1 \\ \hline \cancel{-3z} & 6 \\ \hline & -3 \\ \hline & \frac{6}{-3} \\ \hline & z = -2 \end{array}$$

$$\begin{array}{r|l} \frac{1}{2}x - 9 = -25 & \\ \cancel{\frac{1}{2}x} - 9 & +9 \\ \hline \cancel{\frac{1}{2}x} & -16 \cdot \frac{2}{1} \\ \hline & x = -32 \end{array}$$

Ex. 2:

$$\begin{array}{r|l} -4n - 8n + 17 = 23 & \\ \cancel{-12n} + 17 & -23 \\ \hline \cancel{-12n} & -17 \\ \hline & -12 \\ \hline & \frac{-17}{-12} \\ \hline & n = -\frac{1}{2} \end{array}$$

$$\begin{array}{r|l} 10 = 3n + 20 - n & \\ 10 = 2n + 20 & \\ -20 & -20 \\ \hline -10 = 2n & \\ \hline -\frac{10}{2} = \frac{2n}{2} & \\ \hline & -5 = n \end{array}$$

Ex. 3:

$$\begin{array}{r|l} -3(x+2) + 5x = -9 & \\ \cancel{-3x} - 6 + 5x & = -9 \\ \hline 2x - 6 & = -9 \\ +6 & +6 \\ \hline 2x & = -3 \\ \hline \frac{2x}{2} & = \frac{-3}{2} \\ \hline & x = -\frac{3}{2} \end{array}$$

7. $5 + 1.5(2d - 1) = 0.5$

$$\begin{array}{r} 5 + 3d - 1.5 = 0.5 \\ \cancel{3.5} + 3d = 0.5 \\ \cancel{-2.5} = \cancel{-3.5} \\ \hline 3d = -3 \\ \hline d = -1 \end{array}$$

$$\boxed{d = -1}$$

Ex. 4:

8. You have scored 7, 10, 8, and 9 on four quizzes. Find the score you need on the fifth quiz so that your mean score is 8.

$x =$ fifth quiz score

$$\frac{x + 7 + 10 + 8 + 9}{5} = 8$$

$$5 \cdot \frac{x + 34}{5} = 8 \cdot 5$$

$$\begin{array}{r} x + 34 = 40 \\ \cancel{-34} \cancel{-34} \end{array}$$

$$\boxed{x = 6}$$