

Linear Equations in Disguise Worksheets

Solve the following equations.

1. $\frac{2x + 5}{2} = \frac{3x - 2}{6}$

2. $\frac{6x + 1}{3} = \frac{9 - x}{7}$

Linear Equations in Disguise Worksheets

Solve the following equations.

1. $\frac{2x + 5}{2} = \frac{3x - 2}{6}$

$$\begin{aligned}\frac{2x + 5}{2} &= \frac{3x - 2}{6} \\ 2(3x - 2) &= 6(2x + 5) \\ 6x - 4 &= 12x + 30 \\ 6x - 4 + 4 &= 12x + 30 + 4 \\ 6x &= 12x + 34 \\ 6x - 12x &= 12x - 12x + 34 \\ -6x &= 34 \\ x &= -\frac{34}{6} \\ x &= -\frac{17}{3}\end{aligned}$$

2. $\frac{6x + 1}{3} = \frac{9 - x}{7}$

$$\begin{aligned}\frac{6x + 1}{3} &= \frac{9 - x}{7} \\ (6x + 1)7 &= 3(9 - x)4 \\ 2x + 7 &= 27 - 3x \\ 42x + 7 - 7 &= 27 - 7 - 3x \\ 42x &= 20 - 3x \\ 42x + 3x &= 20 - 3x + 3x \\ 45x &= 20 \\ \frac{45}{45}x &= \frac{20}{45} \\ x &= \frac{4}{9}\end{aligned}$$