

Linear Equations in Disguise Worksheets

Solve the following equations.

1. $\frac{-x - 2}{-4} = \frac{3x + 6}{2}$

2. $\frac{4 - x}{8} = \frac{7x - 1}{3}$

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1. $\frac{-x-2}{-4} = \frac{3x+6}{2}$

$$\begin{aligned}\frac{-x-2}{-4} &= \frac{3x+6}{2} \\ -4(3x+6) &= 2(-x-2) \\ -12x-24 &= -2x-4 \\ -12x-24+24 &= -2x-4+24 \\ -12x &= -2x+20 \\ -12x+2x &= -2x+2x+20 \\ -10x &= 20 \\ x &= -2\end{aligned}$$

2. $\frac{4-x}{8} = \frac{7x-1}{3}$

$$\begin{aligned}\frac{4-x}{8} &= \frac{7x-1}{3} \\ 8(7x-1) &= (4-x)3 \\ 56x-8 &= 12-3x \\ 56x-8+8 &= 12+8-3x \\ 56x &= 20-3x \\ 56x+3x &= 20-3x+3x \\ 59x &= 20 \\ \frac{59}{59}x &= \frac{20}{59} \\ x &= \frac{20}{59}\end{aligned}$$