

Solve each of the following equations:

Q 2. $3x + 7 = 32 - 2x$

$$\begin{aligned} 3x + 7 &= 32 - 2x \\ 3x + 2x &= 32 - 7 \\ 5x &= 25 \end{aligned} \quad \begin{aligned} x &= \frac{25}{5} \\ x &= 5. \end{aligned}$$

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Q 3. $2(x+2) - 3(x-3) = x+7$

$$\begin{aligned} 2x + 4 - 3x + 9 &= x + 7 \\ 2x - 3x - x &= 7 - 9 - 4 \\ -2x &= -6 \end{aligned} \quad \begin{aligned} x &= \frac{-6}{-2} \\ x &= 3. \end{aligned}$$

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Q 4. $8(3-x) - 5 = -3(3-2x)$

$$\begin{aligned} 24 - 8x - 5 &= -9 + 6x \\ -8x - 6x &= -9 + 5 - 24 \\ -14x &= -28 \end{aligned} \quad \begin{aligned} x &= \frac{-28}{-14} \\ x &= 2. \end{aligned}$$

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Q 5. $\frac{2x-5}{3} = \frac{x-2}{2}$ cross multiply!!

$$\begin{aligned} 2(2x-5) &= 3(x-2) \\ 4x - 10 &= 3x - 6 \\ 4x - 3x &= -6 + 10 \end{aligned} \quad \begin{aligned} x &= 4 \\ x &= 4. \end{aligned}$$

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Q 6. $\frac{3x-2}{5} - \frac{2x-3}{4} = \frac{1}{2}$ LCM of 5, 4, 2 = 20.

$$\begin{aligned} 4(3x-2) - 5(2x-3) &= 10(1) \\ 12x - 8 - 10x + 15 &= 10 \\ 2x &= 3 \\ x &= \frac{3}{2} \end{aligned}$$

* note! when you have an equal sign on the top line of a fraction, you can get rid of what's below the line! 10