

Write your answers in the place provided. Passing is 4 of 5 answers completely correct. You may retake this test as needed. You may not use calculators, notes, books or the paper of another person on this assessment. (This one is ~~just~~^{not} for practice!!)

1. Solve the equation $2x - 7 = 3$ for x .

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$$\begin{aligned} 2x - 7 &= 3 \\ +7 &+7 \\ \hline 2x &= 10 \\ \frac{2x}{2} &= \frac{10}{2} \\ x &= 5 \end{aligned}$$

Answer: $x = 5$

2. Solve the equation $P = S + M \cdot T$ for M

$$\begin{aligned} P &= S + M \cdot T \\ -S &-S \\ \hline \frac{P-S}{T} &= \frac{M \cdot T}{T} \end{aligned}$$

Answer: $M = \frac{P-S}{T}$

3. Solve the equation $\frac{12}{(x+2) \cdot x+2} = 4$ for x .

$$\begin{aligned} 12 &= 4(x+2) \\ 12 &= 4x + 8 \\ 4 &= 4x, \quad x = 1 \end{aligned}$$

Answer: $x = 1$

4. Solve the equation $\frac{1}{15} \left(\frac{1}{3}(x-1) + \frac{1}{5}(x-2) \right) = 11$ for x

$$\begin{aligned} 5(x-1) + 3(x-2) &= 165 \\ 5x - 5 + 3x - 6 &= 165 \\ 8x - 11 &= 165 \\ 8x &= 176, \quad x = \frac{176}{8} = 22 \end{aligned}$$

Answer: $x = 22$

5. Solve the equation $(2x+1)^2 = 4x^2 + 3x + 1$ for x

$$\begin{aligned} 4x^2 + 4x + 1 &= 4x^2 + 3x + 1 \\ -4x^2 - 3x - 1 &-4x^2 - 3x - 1 \end{aligned}$$

Answer: $x = 0$

$$x = 0$$