



Equation Review - Solutions

Some equations have one solution, some have variable solutions (depending on another variable), some have infinite solutions, and some have no solutions. In the following problems, you will have some of each of these types.

1. Solve for x. $3x + 12 = \frac{1}{2}(x + 7)$

$$x = -\frac{17}{5}$$

2. Solve for a. $\frac{1}{2}a + \frac{3}{4}b = 3(a - 2b) + 5b$

$$a = \frac{7b}{10}$$

3. Solve for y. $\frac{3y+4}{5} = 2\left(x + \frac{1}{5}\right)$

$$y = \frac{10x - 2}{3}$$

or

$$y = \frac{10}{3}x - \frac{2}{3}$$

4. Solve for x. $5\left(\frac{1}{2}x + 3\right) - 10 = 3\left(\frac{1}{6}x + 1\right) + 2(x + 2)$

no Real solution

5. Solve for m. $2 = \sqrt{3m + 8}$

$$m = -\frac{4}{3}$$

6. Solve for w. $\frac{1}{5}(w - 3) - \frac{2}{5} = 3\left(\frac{1}{15}w + 1\right) - 4$

$$w \in \mathbb{R}$$