

**Solving Equations (3)**

Date: \_\_\_\_\_

Name: \_\_\_\_\_

**1. Solve each of the following equations.**

a)  $\frac{x}{2} + \frac{x}{3} = 5$

b)  $\frac{r}{5} + \frac{r}{2} = 2$

c)  $\frac{m}{6} - \frac{m}{2} = 5$

d)  $\frac{a}{5} - a = \frac{1}{2}$

e)  $\frac{x}{2} + \frac{2x}{3} = \frac{7}{2}$

f)  $\frac{3x}{4} = \frac{x}{3} + \frac{5}{6}$

g)  $\frac{x}{6} + \frac{x}{5} = \frac{5}{12}$

h)  $\frac{4x}{5} - \frac{3}{2} = \frac{2}{3} + \frac{1}{3}x$

i)  $-\frac{3}{4}x - \frac{4x}{5} + \frac{7x}{10} = \frac{-1}{20}$

$$j) -\frac{x}{3} + \frac{x}{4} - \frac{x}{6} = \frac{1}{10}$$

$$k) \frac{x}{5} + \frac{2}{5} = \frac{5x}{6} - \frac{3}{2}$$

$$l) \frac{3x}{10} - \frac{2x}{5} = \frac{3x}{2} + \frac{1}{2}$$

2. Solve each of the following equations.

$$a) \frac{x+1}{3} = \frac{x-2}{2}$$

$$b) \frac{a+5}{3} = \frac{3-a}{7}$$

$$c) \frac{x-3}{4} + \frac{3+x}{3} = \frac{1}{2}$$

$$d) \frac{m+3}{2} - 4 = \frac{4-m}{3} + 7$$

$$e) \frac{8y+9}{4} - 17 = \frac{8-y}{2}$$

$$f) \frac{2-x}{2} + \frac{1}{4} = \frac{4-2x}{5}$$

g)  $\frac{3}{7} = \frac{5-6x}{14} + \frac{2x}{7}$

h)  $\frac{11s-6}{2} = -\frac{3s}{4} + \frac{9-7s}{2}$

i)  $\frac{7(-x-6)}{8} + \frac{3(2x+3)}{4} = -\frac{3}{8}$

3. Solve each of the following equations.

a)  $\frac{a}{2} + 3 = \frac{2a}{3}$

b)  $\frac{3k}{4} + \frac{1}{2} = \frac{2k}{3}$

c)  $\frac{5x-3}{6} = \frac{10x+6}{3}$

d)  $\frac{y+3}{5} - \frac{5}{4} = \frac{y-1}{4}$

e)  $\frac{5-2a}{3} + \frac{6a-15}{4} = \frac{25}{4}$

**Answers:**

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|--------------------|--------------------|-------------------|-------------------|-------------------|--------------------|
| 1. a) 6            | b) $\frac{20}{7}$  | c) -15            | d) $-\frac{5}{8}$ | e) 3              | f) 2               |
| g) $\frac{25}{22}$ | h) $\frac{65}{14}$ | i) $\frac{1}{17}$ | j) $-\frac{2}{5}$ | k) 3              | l) $-\frac{5}{16}$ |
| 2. a) 8            | b) $-\frac{13}{5}$ | c) $\frac{3}{7}$  | d) 13             | e) $\frac{15}{2}$ | f) $\frac{9}{2}$   |
| g) $-\frac{1}{2}$  | h) $\frac{10}{13}$ | i) $\frac{21}{5}$ |                   |                   |                    |
| 3. a) 18           | b) -6              | c) -1             | d) -8             | e) 10             |                    |