

Exercise 1

Solve these equations:

1A a  $\frac{x}{4} = \frac{3}{2}$

b  $\frac{y}{4} = \frac{1}{2}$

c  $\frac{x}{6} = -\frac{1}{2}$

d  $\frac{y}{3} = -\frac{5}{6}$

2A a  $\frac{x}{5} = \frac{2}{1}$

b  $\frac{x}{3} = 4$

c  $\frac{x}{5} = -2$

d  $\frac{3x}{4} = -6$

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

b  $\frac{y}{2} - \frac{y}{4} = \frac{1}{6}$

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

4A a  $\frac{t+1}{2} = \frac{t}{3}$

b  $\frac{u-1}{3} = \frac{u}{5}$

c  $\frac{v+3}{2} = \frac{v}{4}$

5A a  $\frac{1}{5}(2d-4) = 2$

b  $\frac{1}{3}x + \frac{1}{4} = 1$

c  $\frac{1}{2}(k+1) + \frac{1}{3} = 1$

6B a  $\frac{x+5}{2} + \frac{x}{3} = 0$

b  $\frac{x-3}{5} - \frac{x}{2} = 1$

c  $\frac{y+2}{2} + \frac{y-1}{4} = 2$

7B a  $\frac{a}{2} - \frac{a-1}{3} = 0$

b  $\frac{b}{4} - \frac{b-3}{2} = 1$

c  $\frac{c+3}{3} - \frac{c-5}{5} = 2$

8B a  $\frac{1}{x} + \frac{1}{2} = 1$

b  $\frac{2}{y} - \frac{1}{3} = 0$

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

9B a  $\frac{12}{x+1} = 3$

b  $\frac{3}{x-2} = 1$

c  $\frac{10}{2x+3} = 4$

Cross-MultiplicationExercise 1B

Solve each equation for x:

1A a  $\frac{x}{6} = \frac{3}{2}$

b  $\frac{x}{3} = \frac{5}{2}$

c  $\frac{2x}{3} = \frac{1}{2}$

d  $\frac{3x}{5} = \frac{2}{3}$

2A a  $\frac{1}{2} = \frac{2}{x}$

b  $\frac{2}{3} = \frac{x}{6}$

c  $\frac{3}{x} = \frac{4}{5}$

d  $\frac{2}{3} = \frac{1}{x}$

3A a  $\frac{x}{a} = \frac{2}{1}$

b  $\frac{x}{b} = \frac{1}{2}$

c  $\frac{x}{c} = \frac{4}{3}$

d  $\frac{x}{d} = \frac{-1}{2}$

4A a  $\frac{x}{a} = \frac{b}{c}$

b  $\frac{x}{p} = \frac{t}{v}$

c  $\frac{d}{x} = \frac{m}{n}$

d  $\frac{g}{h} = \frac{k}{x}$

5A a  $2 = \frac{6}{x}$

b  $3 = \frac{n}{x}$

c  $a = \frac{b}{x}$

d  $1 = \frac{3}{x}$

6B a  $\frac{x+1}{2} = 3$

b  $\frac{x-2}{3} = \frac{3}{2}$

c  $\frac{x+5}{4} = \frac{1}{2}$

d  $\frac{x+6}{3} = 2$