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Math worksheet on *'Fraction Manipulation Algebra - Orientation 3 (Level 3)'*. Part of a broader unit on *'Algebra Basic Concepts - Advanced'*

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1 Solve the fraction for 'x' in terms of the variables and reduce.

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

a $x = \frac{4a}{4b}$ **b** $x = \frac{4a \cdot b}{4}$ **c** $x = \frac{b}{16a}$

d $x = \frac{a}{16b}$ **e** $x = \frac{b}{a}$

2 Solve the fraction for 'x' in terms of the variables and reduce.

$$2a = \frac{2c}{x}$$

a $x = 4a \cdot c$ **b** $x = \frac{2a}{2c}$

c $x = \frac{c}{a}$ **d** $x = \frac{2c}{2a}$

3 Solve the fraction for 'x' in terms of the variables and reduce.

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

a $x = \frac{3a}{3b}$ **b** $x = \frac{b}{a}$ **c** $x = \frac{3a \cdot b}{3}$

4 Solve the fraction for 'x' in terms of the variables and reduce.

$$4a = \frac{2c}{x}$$

a $x = \frac{c}{8a}$ **b** $x = \frac{c}{a}$ **c** $x = \frac{c}{2a}$

d $x = \frac{4c}{2a}$

5 Solve the fraction for 'x' in terms of the variables and reduce.

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

a $x = \frac{2a}{3b}$ **b** $x = \frac{2b}{3a}$ **c** $x = \frac{a}{6b}$

d $x = \frac{b}{6a}$ **e** $x = \frac{a \cdot b}{6}$

6 Solve the fraction for 'x' in terms of the variables and reduce.

$$a = \frac{2b}{4x}$$

a $x = \frac{2a}{4b}$ **b** $x = \frac{b}{8a}$ **c** $x = \frac{b}{2a}$

d $x = \frac{a}{8b}$ **e** $x = \frac{a \cdot b}{8}$

7 Solve the fraction for 'x' in terms of the variables and reduce.

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

a $x = \frac{3b}{4a}$ **b** $x = 12a \cdot b$

c $x = \frac{3a}{4b}$ **d** $x = \frac{4b}{3a}$