

# Unit 1: Ratios, Rates, Proportional Reasoning

## A: Two Term ; Three Term Ratios

### Two-Term

- compares two quantities in the same units.

$a:b$  or  $a$  to  $b$

### Three-Term

- compares three quantities in the same units.

$a:b:c$  or  $a$  to  $b$  to  $c$

### Examples:

1. Write each ratio using ratio notation. Express in lowest terms.

a) \$10 compared to \$50.

$$10 : 50$$

$$\div 10 \quad \div 10$$

divide each by 10.

$$\boxed{1:5} \text{ lowest terms.}$$

b) A class of 14 students has 6 girls in it. What is the ratio of girls to boys.

$$14$$

$$- 6$$

$$\hline 8 \text{ boys}$$

girls to boys

$$6 : 8$$

$$\div 2 \quad \div 2$$

divide each by 2.

$$\boxed{3:4} \text{ lowest terms.}$$

2. Write each ratio in fraction form. Express in lowest terms.

a) You spend \$6 out of \$32.

$$\frac{6 \div 2}{32 \div 2}$$

divide each by 2.

$$\boxed{\frac{3}{16}}$$

lowest terms.

b) A bag contains 14 blue and 4 red beads. Compare red beads to total beads.

$$\frac{14}{+ 4}$$

18 beads

$$\frac{4 \div 2}{18 \div 2}$$

divide each by 2.

$$\boxed{\frac{2}{9}}$$

lowest terms

3. Identify the missing number to make an equivalent fraction.

a)  $\frac{1}{2} = \frac{?}{10}$

Think  $2 \times ? = 10$      $(2 \times 5) = 10$   
Whatever you do to the top  
you do to the bottom.

$$\frac{1 \times 5}{2 \times 5} = \frac{5}{10}$$

$$\boxed{\text{Missing \#} = 5}$$

b)  $\frac{4}{?} = \frac{24}{30}$

Think  $24 \div ? = 4$      $(24 \div 6) = 4$

Whatever you do to the top you do to the bottom.

$$\frac{4}{5} = \frac{24 \div 6}{30 \div 6}$$

missing # = 5

Assignment Pg. 51 #5-11

