

WARM UP

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MATH COURSE I

Ratios and Rates

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VOCABULARY

Ratio: a comparison of two quantities using division

Equivalent ratio: ratios that name the same comparison

Ratios

Ratios can be written three ways.

1) As a fraction $2/3$

2) With the word "to" 2 to 3

3) With a colon 2:3

Examples

Animals at the Vet	
Cats	5
Dogs	7
Rabbits	2

A) Cats to rabbits: $5/2$, 5 to 2, or 5:2

B) Rabbits to cats: $2/5$, 2 to 5, or 2:5

C) Dogs to total number of pets:

$7/14$, 7 to 14, 7:14

D) Rabbits to dogs:

E) Cats to dogs:

Equivalent Ratio

- **A.K.A. Equivalent Fractions**

Ratios that name same comparison are equivalent.

Example

***Write three equivalent ratios to compare the number vowels to the number of consonants.**

a e i o b c d f g h

$$4:6 = 4/6 = 8/12 = 2/3$$

Proportions

An equation stating that two ratios are equal (equivalent ratios)

$5/6 = 25/35$ Explain why this is not a proportion.

$$5 \times 5 = 25; \quad 6 \times 5 \neq 35$$

Practice

[Practice Writing Ratios](#)

[Practice Writing Equivalent Ratios](#)

[Proportional Relationships in Geometry](#)

[Proportional Relationships Word Problems](#)

[Proportional Relationships with Scales](#)