

Grade 6 Warm Up

Feb. __, 2019

Quiz tomorrow



1) Determine if the following ratios are equivalent

a) $12:16$ $3:4$
 $6:8$ $2 \div 2$
 $3:4$ $2 \div 2$
 $12:16$ 2×4
 Same ✓

b) $7:15$ $14:32$
 $14:30$ 2×2
 NO
 Term 2 not equal

2) Find the missing value for the equivalent ratios

a) $p:18 = 4:9$
 $p=8$
 $\times 2$
 $\div 2$

b) $56:40 = t:5$
 $t=7$
 $\div 8$
 $\div 8$

3) All the grade 6 class is going on a field trip. There has to be a 4:1 ratio of students to chaperons. If there are 32 grade 6 students then how many chaperones are needed?

Students : Chaperons
 $4 : 1$
 $\times 8$ $\left(\begin{array}{c} 4 \\ 32 \end{array} \right) : \left(\begin{array}{c} 1 \\ ? \end{array} \right) \times 8$

I need 8 Chaperons for 32 students.

Test on Ch. 5 Fraction, Ratios, Percent

Friday 8, 2019

Quiz tomorrow

1) Write an equivalent ratio with 40 as one of the terms.

a) $5:10$

b) $8:7$
 $40:35$

$5:10$
 $40:80$

OR

$5:10$
 $20:40$

2) List all the ratios that are equivalent to $5:7$ and have the second term that is less than 42.

$5:7$
 $10:14$
 $15:21$
 $20:28$
 $25:35$
 $30:42$

Quiz outline

- # 1 Given 2 fraction determine which is $>$, $<$ or $=$ (show work)
- # 2 Order fraction (3) from least to greatest
- # 3 word problem with fraction \uparrow
- # 4 Given a picture determine ratios of Shapes
- # 5 write equivalent ratios
- # 6 Reduce Ratio
- # 7 word problem with Ratio

Answers to worksheet

Equivalent Ratio

A) Check for equivalency.

- 1) Are 2 : 3 and 10 : 15 equivalent? Yes No
 $\begin{matrix} \times 5 & \times 5 \\ 2 & : & 3 \\ 10 & : & 15 \end{matrix}$
- 2) Are 8 : 12 and 4 : 5 equivalent? Yes No
 $\begin{matrix} \div 2 & \div 2 \\ 8 & : & 12 \\ 4 & : & 6 \end{matrix}$
- 3) Are 21 : 6 and 7 : 2 equivalent? Yes No
 $\begin{matrix} \div 3 & \div 3 \\ 21 & : & 6 \\ 7 & : & 2 \end{matrix}$
- 4) Are 6 : 9 and 24 : 32 equivalent? Yes No
 $\begin{matrix} \times 4 & \times 4 \\ 6 & : & 9 \\ 24 & : & 36 \end{matrix}$

B) Find the unknown value in each problem.

- 1) $5:6 = 15:m$ $m = \underline{18}$
- 2) $k:5 = 7:1$ $k = \underline{35}$
- 3) $6:16 = 3:p$ $p = \underline{8}$
- 4) $36:63 = s:7$ $s = \underline{4}$
- 5) $9:y = 27:15$ $y = \underline{5}$
- 6) $u:3 = 2:6$ $u = \underline{1}$

C) An urn has four different color balls. The ratio of blue balls to red balls is 3:7 and the ratio of green balls to yellow balls is 9:21. Are the ratios of blue balls to red balls and green balls to yellow balls equivalent?

green : yellow
 9:21
 $\begin{matrix} \div 3 & \div 3 \\ 3 & : & 7 \end{matrix}$

blue : red
 3 : 7



Equivalent

Practice

1. Write 2 equivalent ratios for each ratio.

- a) 3:1 b) 4:2 c) 1:2 d) 5:6 e) 3:5
 f) 4:9 g) 7:8 h) 8:3 i) 1:1 j) 2:5

Handwritten solutions for question 1:

- a) $3:1 \xrightarrow{\times 2} 6:2 \xrightarrow{\times 3} 9:3$
- b) $4:2 \xrightarrow{\div 2} 2:1 \xrightarrow{\times 3} 6:3$
- c) $1:2 \xrightarrow{\times 2} 2:4 \xrightarrow{\times 3} 3:6$
- d) $5:6 \xrightarrow{\times 2} 10:12 \xrightarrow{\times 3} 15:18$
- e) $3:5 \xrightarrow{\times 2} 6:10 \xrightarrow{\times 3} 9:15$
- f) $4:9 \xrightarrow{\times 2} 8:18 \xrightarrow{\times 3} 12:27$
- g) $7:8 \xrightarrow{\times 2} 14:16 \xrightarrow{\times 3} 21:24$
- h) $8:3 \xrightarrow{\times 2} 16:6 \xrightarrow{\times 3} 24:9$
- i) $1:1 \rightarrow 2:2 \rightarrow 3:3$
- j) $2:5 \xrightarrow{\times 2} 4:10 \xrightarrow{\times 3} 6:15$

2. Write an equivalent ratio with 20 as one of the terms.

- a) $4:5 \xrightarrow{\times 5} 20:25$ b) $2:8 \xrightarrow{\times 10} 20:80$ c) $7:4 \xrightarrow{\times 5} 35:20$ d) $10:3 \xrightarrow{\times 2} 20:6$

3. Are the ratios in each pair equivalent? Explain how you know.

- a) 7 to 14 and 1 to 2: $7 \div 7 = 1$, $14 \div 7 = 2$, $1:2$ **Yes**
- b) 6:9 and 3:2: $6 \div 2 = 3$, $9 \div 3 = 3$, $6:9 \neq 3:2$ **No**
- c) 1 to 10 and 4 to 40: $1 \times 4 = 4$, $10 \times 4 = 40$, $4:40$ **Yes**

4. The table shows the number of beads used to make a necklace.

Ginger wants to make a smaller necklace using the same ratio of pink to white beads. How many different necklaces could Ginger make? How do you know?

Colour	Number
Pink	30
White	35

$30 + 35 = 65$ beads

Pink : White
 $30 : 35 \xrightarrow{\div 5} 6 : 7$
 $12 : 14$
 $18 : 21$
 $24 : 28$

5. In a card game, each player is dealt 5 cards. Make a table to show the total number of cards dealt for each number of players from 3 to 6. Write each ratio of players to cards dealt.

Number of Players	Total Number of Cards Dealt

Chapter 5 Fractions Ratios Percents Lesson 7 Exploring Percents Day 1 February 14, 2019

6. Ms. Olivieri's class plays a game in teams. Each team has the same number of students. The ratio of teams to players is 8:32.
- a) How many students are in Ms. Olivieri's class? **32**
- b) How many students are on each team? **$32 \div 8 = 4$ students**
- Team : Players**
8 : 32



7. Atiba plays for the Linden Woods Vipers in the Winnipeg Youth Soccer League. The ratio of players to soccer balls at practice sessions is 5:2.
- How many soccer balls are needed for 20 players?

Players : Soccer balls

$$\begin{array}{l} 5 : 2 \\ \times 4 \quad \downarrow \quad \times 4 \\ 20 : 8 \end{array}$$

Need 8 soccer balls for 20 players

8. The word "fun" has a vowel-to-consonant ratio of 1:2.
- a) Find 3 words with a vowel-to-consonant ratio of 2:3.
- b) Choose a vowel-to-consonant ratio and find 3 words for it.

Many answers **2:3**
v:c

a) **b a k e f**
 ↑ ↑
 v v

a) **beans**

9. Su Mei's recipe for bean salad calls for 3 cans of lima beans, 2 cans of pinto beans, and 1 can of kidney beans. Su Mei is making bean salad for her family reunion. Suppose she uses 9 cans of lima beans.

Lima : Pinto : kidney

$$\begin{array}{l} 3 : 2 : 1 \\ \times 3 \quad \times 3 \quad \times 3 \\ 9 : 6 : 3 \end{array}$$

- a) How many cans of pinto beans will she use? **6**
- b) How many cans of kidney beans will she use? **3**

10. Katherine has diabetes. At each meal, she must estimate the mass in grams of carbohydrates she plans to eat, then inject the appropriate amount of insulin. Katherine needs 1 unit of insulin for 15 g of carbohydrates. Katherine's lunch has 60 g of carbohydrates. How many units of insulin should Katherine inject?

Insulin : Carbs

$$\begin{array}{l} 1 : 15g \\ \times 4 \quad \downarrow \quad \times 4 \\ _ : 60g \\ \downarrow \\ \text{needs 4 units} \end{array}$$

11. To make a jug of plant fertilizer, Malaika uses 6 cups of water and 3 scoops of fertilizer. Bart uses 8 cups of water and 5 scoops of fertilizer. Will Malaika's and Bart's plant fertilizer have the same strength? Explain.

Bart

cups water : ^{scoop} fertilizer

$$\begin{array}{l} 8 : 5 \\ \times 3 \quad \downarrow \quad \times 3 \\ 24 : 15 \end{array}$$

Take to same water or fer.

Malaika


cups Water : scoops Fertilizer

$$\begin{array}{l} 6 : 3 \\ \times 5 \quad \downarrow \quad \times 5 \\ 30 : 15 \end{array}$$

↑ uses more water so weaker

12. Use counters to find all the ratios that are equivalent to 2:3 and have a second term that is less than 40. List the ratios.

Extra Practice 5

 Extra Practice 5 Equivalent Ratio.pdf

Attachments

Hundreds chart.jpg

Extra Practice 5 Equivalent Ratio.pdf