Grade 6 Warm Up

Jan. 21 , 2020

Quiz tomorrow

FIELD TRIP

1) Determine if the following ratios are equivalent

a) 12: 16   3:4

$\div 4$ $\div 4$

Yes

b) 7:15   14:3̶0̶

$\times 2$ $\times 2$

30

No

2) Find the missing value for the equivalent ratios

a)   p : 18 = 4: 9

$\times 2$

$\times 2$

P = 8

b)   56 : 40 = t : 5

$\div 8$

$\div 8$

7

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

$\times 8$

4 : 1

32 : ? $\div 8$

$\times 8$

We will need 8 chaperons for 32 students.

Answers to worksheet

Equivalent Ratio   Sheet 1

A) Check for equivalency.

1) Are $2 : 3$ and $10 : 15$ equivalent?   ✓ Yes   ○ No
      x5 x5
    10:15

2) Are $8 : 12$ and $4 : 5$ equivalent?   ○ Yes   ✓ No
      ÷2   ÷2
      4:6

3) Are $21 : 6$ and $7 : 2$ equivalent?   ✓ Yes   ○ No
      ÷3   ÷3
      7:2

4) Are $6 : 9$ and $24 : 32$ equivalent?   ○ Yes   ✓ No
      x4 x4
    24:36

B) Find the unknown value in each problem.

1) $5 : 6 = 15 : m$ 2) $k : 5 = 7 : 1$ 3) $6 : 16 = 3 : p$

      m = __18__   k = __35__   p = __8__
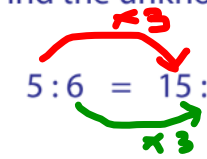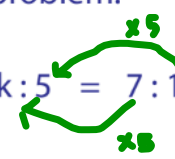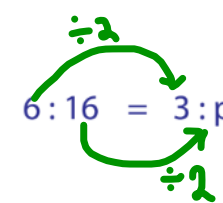
4) $36 : 63 = s : 7$ 5) $9 : y = 27 : 15$ 6) $u : 3 = 2 : 6$
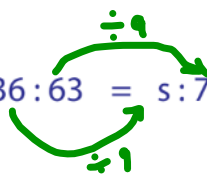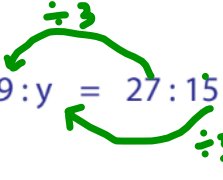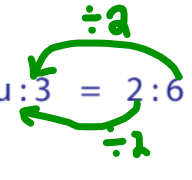
      s = __4__   y = __5__   u = __1__

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   blue :red
                    9:21   3 : 7
                    ÷3   ÷3
                    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

a) 3:1 ⟩×2
   6:2 ⟩×2
   ×3 ⟶ 9:3

b) 4:2 ⟩÷2
   2:1
   ×3 ⟶ 6:3

c) 1:2
   ×2 ⟩ 2:4 ⟩×3
   3:6

d) ×2 ⟩ 5:6 ⟩×2
   10:12 ⟩×3
   15:18

e) 3:5 ⟩×2
   6:10 ⟩×3
   9:15

f) 4:9
   8:18 ⟩×2 ⟩×3
   12:27

g) 7:8 ⟩×2
   14:16 ⟩×3
   21:24

h) 8:3 ⟩×2
   ×3 ⟩ 16:6
   24:9

i) 1:1
   2:2
   3:3

j) 2:5 ⟩×2
   ×2 ⟩ 4:10 ⟩×3
   ×3 ⟩ 6:15

2. Write an equivalent ratio with 20 as one of the terms.
   a) 4:5   b) 2:8   c) 7:4   d) 10:3
   ×4:×4   ×10:×10   ×5:×5   ×2:×2
   16:20   20:80   35:20   20:6

3. Are the ratios in each pair equivalent? Explain how you know.
   a) 7 to 14 and 1 to 2
   ÷7 ÷7
   1:2 Yes

   b) 6:9 and 3:2
   ×2 ×2
   6:4
   No

   c) 1 to 10 and 4 to 40
   ×4 ×4
   4 to 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 ⟩÷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

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?

Team : Players (Total)
8 : 32
1 : 4   ⟩ 2 ÷ 8

32 ÷ 8 = 4 students

Each team means 1 team

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
×4 ⟨ 5 : 2 ⟩ ×4
     20 : 8

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 r
       ↑   ↑
       v   v

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

lima : Pinto : kidney
  3 : 2 : 1
×3 ⟨ ×3   ×3
  9 : 6 : 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? **4**

Insulin : Carbs
×4 ⟨ 1 : 15g ⟩ ×4
     __ : 60g
       ↓
   needs 4 units

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
×3 ⟨ 8 : 5 ⟩ ×3
    24 . 15

Take to same water or fer.

Mal

cups water : scoops fertilizer
     6 : 3
×5 ⟨   ⟩ ×5
    30 : 15

↑ 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.

Test on Ch. 5   Fraction, Ratios, Percent

Wed Jan. 29

Date: jan 29, 2020

## Quiz tomorrow

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

a) 5 : 10

OR

×8 $5 : 10$ ×8
   $40 : 80$

×4 $5 : 10$ ×4
   $20 : 40$

b) 8 : 7

×5 $40 : 35$ ×5

On test a Similar one

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

×2 $5 : 7$ ×2
   $10 : 14$

×3 $5 : 7$ ×3
   $15 : 21$

×4 $5 : 7$ ×4
   $20 : 28$

×5 $5 : 7$ ×5
   $25 : 35$

×6 $5 : 7$ ×6
   $30 : 42$ ← is this less than 42

There are 4 ratios

Quiz outline

1) Given 2 fraction determine which is

>, <or = (show work) find Common Denominators

#2 Order fraction (3 or them) from least to greatest

and either
all mixed or all improper
fraction

#3 word problem (with ~~word problems~~ (similar to warm ups)

#4) Given a picture determine ratios of shapes

#5) write equivalent ratios when provided with a ratio

#6) Reduce Ratios

#7) Word problem with ratios (similar to the warm ups & HW) Find missing term

Extra Practice 5

Extra Practice 5 Equivalent Ratio.pdf

#1, 2, 3, 4, 7a

3)

4 : 3
8 : 6   ×2
12 : 9
16 : 12
20 : 15   ×3 each time   See a patter
24 : 18
28 : 21
32 : 24
36 : 27
40 : 30
44 : 33
48 : 36

×5   ×3   ×4

See pattern add 4 each time

Attachments

Hundreds chart.jpg

Extra Practice 5 Equivalent Ratio.pdf