Grade 8 Warm Up

Mar. 27, 2017

1) The ratio of cats to dogs at the animal shelter is 4 to 5.
How many cats could there be? How many dogs?
Write six different answers.

Cats : Dogs

$\times 3$ $\times 2$ $\left(\begin{array}{c} 4 : 5 \\ 8 : 10 \\ 12 : 15 \end{array} \right) \times 2$ $\times 3$

16 : 20
20 : 25
24 : 30
28 : 35

2) The length-to-width ratio of Colby's poster is 3:2.
The poster is 90 cm long. How wide is it?

Length : width

$\times 30 \left(\begin{array}{c} 3 : 2 \\ 90\,cm : x_{60}\,cm \end{array} \right) \times 30$

Width is 60 cm

$$3 : 5$$

$$\div 5 \uparrow \quad 15 : 25 \quad \text{Reduce} \div 5$$

$$\times 7 \quad \quad \quad \times 7$$

$$21 : \underset{35}{x}$$

Sometimes reduce before finding equivalent ratios

14. (a) total amount of ingrediants

$11 \, cups$

(b) oranges to apples

$3 : 2$

mayonnaise to macaroni

$2 : 3$

apples to mayonnaise to celery

$2 : 2 : 1$

(c) apples and oranges to total ingredients   fraction   percent

$5 : 11$ $\frac{5}{11}$ 0.455

45.5%

(d) with 2 oranges instead of 3

oranges to apples

$2 : 2$

mayonnaise to macaroni

$2 : 3$

apples to mayonnaise to celery

$2 : 2 : 1$

(c) apples and oranges to total ingredients   fraction   percent

$4 : 10$ $\frac{4}{10}$ 40%

15.

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1. Answer will vary
   students' opinion

2. A ratio is in simplest form if
   a)
   there are no common factors in
   the terms.

   b) Example1 is simplest form,
      Ex 2 is not.

4. Are 3:2 and 2:3 the same?
   ⭐
      Order is important, so no the
   ratios are not the same.

5 a) 1:2
⭐ ⭐   2:4, 4:8, 8:16

   b) 2:3
⭐   4:6, 40:60, 10:15

   ⭐ c) 1:4
      2:8, 4:16, 10:40

6a) 3 : 4
★ 30 : 40,   6 : 8 ,   12 : 16

★b) 14 : 4
   28 : 8 ,   42 : 12,   7 : 2

★c) 24 : 25
   240 : 250,   48 : 50,   72 : 75

7a) 1 : 3 : 6
★ 2 : 6 : 12,   4 : 12 : 24,   3 : 9 : 18

★b) 12 : 5 : 7
   24 : 10 : 14,   36 : 15 : 21 ,   48 : 20 : 28

★c) 24 : 4 : 8
   12 : 2 : 4,   240 : 40 : 80,   6 : 1 : 2

★8a) 5 : 15   ★b) 6 : 9
       1 : 3   2 : 3

★c) 3 : 12 : 18   ★d) 110 : 70 : 15
     1 : 4 : 6   22 : 14 : 3

9a) chairs : tables
⭐   32 : 8
        4 : 1

b) Amer. cars : Jap. cars
⭐   4 : 12
          1 : 3

c) blue paint : yellow paint : white paint
⭐   6 : 2 : 1

d) Canadian stamps : Amer stamps : Asian stamps
⭐   12 : 24 : 9
            4 : 8 : 3

10 a) $2 : 7 = \underline{8} : 28$
⭐   ×4   ×4

b) $5 : 12 = 25 : \underline{60}$
⭐   ×5   ×5

c) $\underline{40} : 24 = 5 : 3$
⭐   ×8   ×8

d) $3 : \underline{7} : 11 = 30 : 70 : 110$
⭐

11.

★ $2:3:4 = 6:9:12$

$8:5:4 = 16:10:8$

$3:2:1 =$

$3:6:9 = 1:2:3$

$5:8:4$

$9:12:15 = 3:4:5$

★ b) They are equivalent if each term is multiplied or divided by the same number.
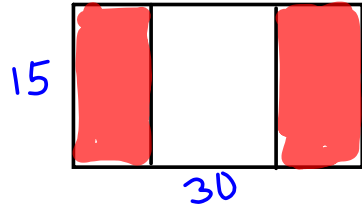
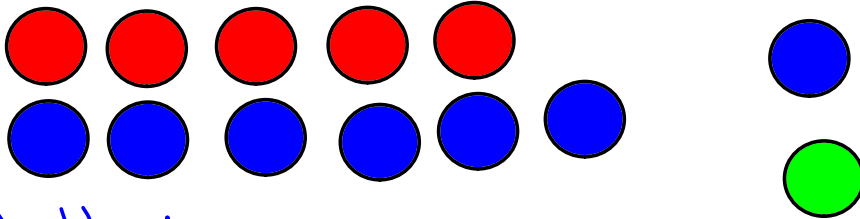12. non fiction : fiction

$3 : 1$

$300 : 100$

$1500 : 500$

b) There are numerous answers, depending on the size of the library.

13. Length : width
         2 : 1
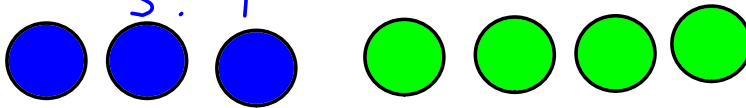   20 : 10
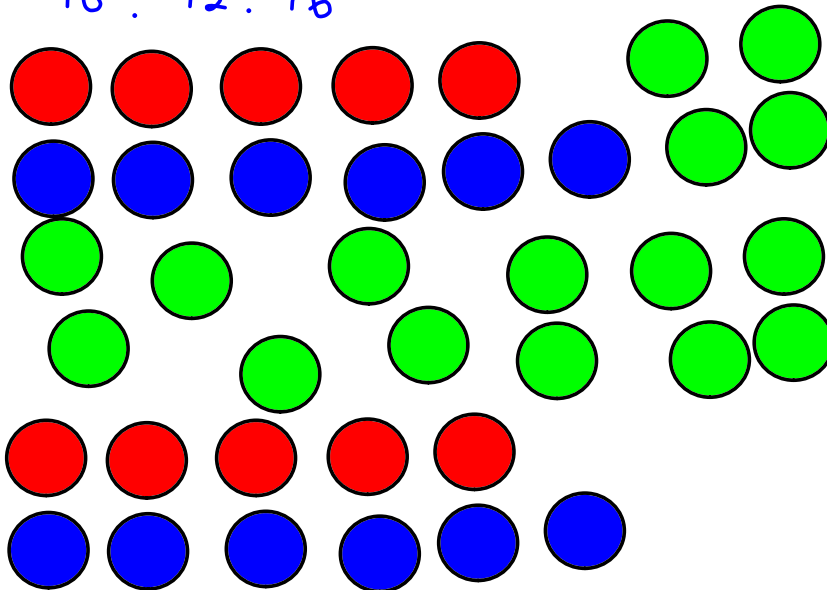   30 : 15   — largest from
                      the sheet of paper

15
30

14. red : blue
         5 : 6

b) blue : green
        3 : 4

c) red : blue : green
       10 : 12 : 16

(b) 10 : 12 : 16
        r   b   g
    satisfies all 3.

Class/Homework

Friday's

pg. 273-274   # 4a ,5a , 6a, 8a,bc, 9(a,b,c,d), #10(a,b,c,)
(you do not needtables for 5-6)

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