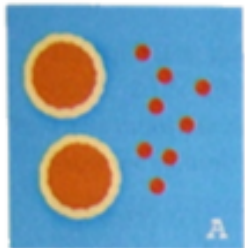





Grade 8 Warm Up


Write the ratio of pepperoni pieces to pizza for each picture?



Pep : Pizza
8 : 2



Pep : Pizza
9 : 3



Pep : Pizza
5 : 2

Mental Math

1) $\underline{3500} \times \underline{20}$
70 000

2) $(-8) - (+5)$ 2)
 \downarrow add \downarrow opp
 $(-8) + (-5)$
 (-13)

$\$6.93 + \5.98
 \downarrow
 $7 + 5.98 = 12.98$
 7 cents too much

3) 3.5×4
 \downarrow double \downarrow half
 7×2
 14

4) $454 \times \underline{100}$
 45 400

$= \$12.91$

Go over homework , pg. 266 # 1,2, 4-15

1. A part to a whole ratio compares part of a group to a whole group, while a part to a part ratio compare one group to another group.

Example Part to a whole girls to all students
Part to a part girls to boys

2. $4 : 35$ can be written as a percent by changing the equivalent fraction to a decimal, and then to the equivalent percent

$$4/35 = 0.114 \text{ or } 11.4\%$$

😊 4 a) $5:8$
 $\frac{5}{8}$

b) $12:16$
 $\frac{12}{16}$

c) $4:9$
 $\frac{4}{9}$

d) $24:25$
 $\frac{24}{25}$

😊 5 a) $19:20$
 $\frac{19}{20} = \frac{95}{100} \text{ } 95\%$


b) $12:15$
 $\frac{12}{15} = \frac{4}{3} = \frac{80}{100} \text{ } 80\%$

c) $3:8$
 $\frac{3}{8} = 0.125$
 12.5%

d) $5:6$
 $\frac{5}{6} = 0.833$
 83.3%

6. a) $3:5 \rightarrow$ red:green
 b) $7:5 \rightarrow$ blue:green
 c) $5:15 \rightarrow$ green:all
 d) $3:5:7 \rightarrow$ red:green:blue
 e) $3:12 \rightarrow$ red to (green and blue)


7. a) orange to all
 $3:15$ $\frac{3}{15}$
 b) white to all
 $1:15$ $\frac{1}{15}$
 c) yellow to pink
 $7:4$ 7 to 4
 d) yellow: white: orange
 $7:1:3$ 7 to 1 to 3

8. (a) T- shirts to all garments
 $5:7$

(b) $\frac{5}{7} = 0.714$ or 71.4%

Tshirt $\rightarrow 5$
 Shorts $\rightarrow 2$

 Total = 7

9 (a) (i) Green counter to red counters
 9 to 7

(ii) girls to boys
 8 to 3

(iii) Flour to sugar to milk
 3 to 1 to 2

(b) part to whole

(i) green to all
 9 to 16

red to all
 7 to 16

(ii) girls to students
 8 to 11

boys to students
 3 to 11

(iii) flour to ingredients
 3 to 6

sugar to ingredients
 1 to 6

milk to ingredients
 2 to 6

10. (a) boys to girls

$$12:14$$

(b) girls to boys

$$14:12$$

(c) boys to students Percent

$$\frac{12}{26}$$

$$0.462 \text{ or } 46.2\%$$

(d) 2 boys leave

new ratio

boys to students

percent

$$10:24$$

$$\frac{10}{24}$$

$$0.417 \quad 41.7\%$$

😊 11. 8 red, 5 green, 2 orange, 3 purple, 1 blue and 6 yellow

(a) (i) red: purple

$$8:3$$

(ii) green : blue

$$5:1$$

(iii) purple : blue: green

$$3:1:5$$

(iv) orange and yellow : total candies

$$8:25$$

(b) 3 red, 2 green and 4 yellow were eaten

(i) red: purple

$$5:3$$

(ii) green : blue

$$3:1$$

(iii) purple : blue: green

$$3:1:3$$

(iv) orange and yellow : total candies

$$4:16$$

$$5r, 3g, 2o, 3p \\ 1b, 2y$$

12(a) explain $\frac{2}{7}$ as a ratio

2 out of 7

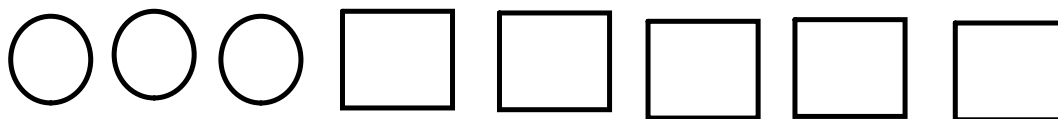
(b) real life situation

2 red markers, 7 green markers



13 Draw diagrams for

(a) two different for 3: 5



(b) 7 : 1

(c) 5 : 2 : 4

(d)

14. (a) total amount of ingredients



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

$\frac{2+3}{5+11}$ 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%

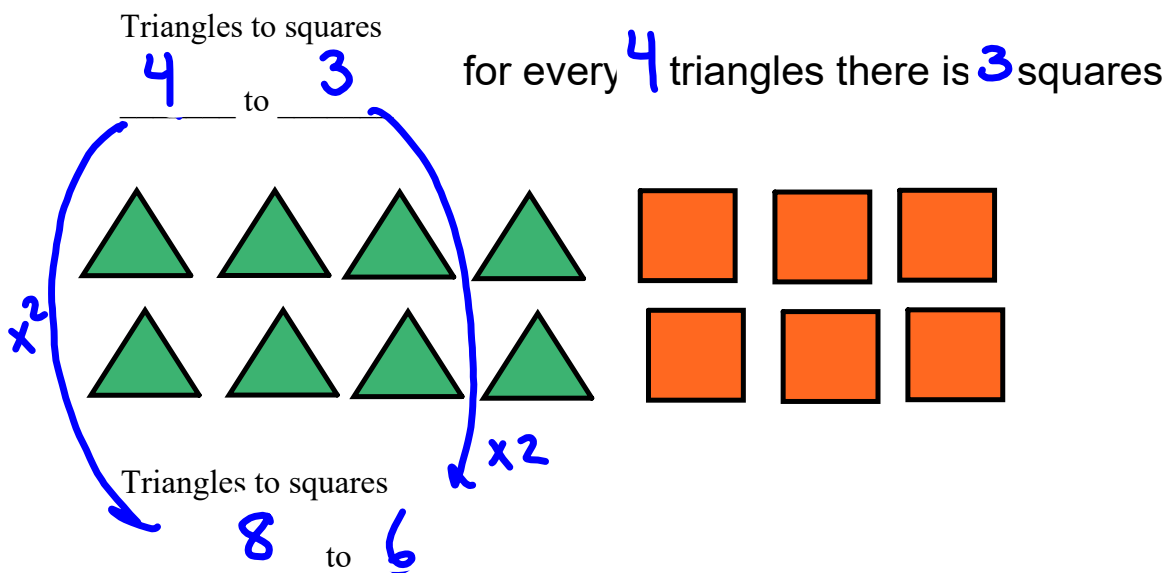
15.

Equivalent Ratios

How do you find equivalent fractions?



What is the ratio of triangles to squares?



4 to 3 = 8 to 6. These are called equivalent ratios. Equivalent ratios are equal.

To find equivalent fractions, multiply (or divide) all terms by the same number.

You can find **equivalent ratios** by dividing.
Divide the terms by the same number.

1st Term	20	10	4	2	
2nd Term	30	15	6	3	

Handwritten annotations on the table include:
 - A green arrow from 20 to 10 labeled $\div 2$.
 - A red arrow from 10 to 5 labeled $\div 2$.
 - A purple arrow from 4 to 2 labeled $\div 2$.
 - A red arrow from 30 to 15 labeled $\div 2$.
 - A green arrow from 30 to 10 labeled $\div 3$.
 - A purple arrow from 6 to 3 labeled $\div 2$.
 - The text "Term 1 : Term 2" is written below the table.

Three equivalent ratios of 20:30 are:

$$\begin{array}{l} 10 : 15 \\ 4 : 6 \\ 2 : 3 \end{array}$$

To write a ratio in its simplest form, divide the terms by their GCF.

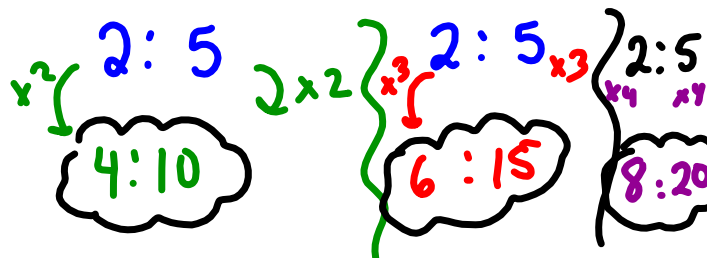
Term 1 : Term 2

$$\begin{array}{c} 21:14 \\ \div 7 \quad \left(\quad \right) \quad \div 7 \\ 3:2 \end{array}$$

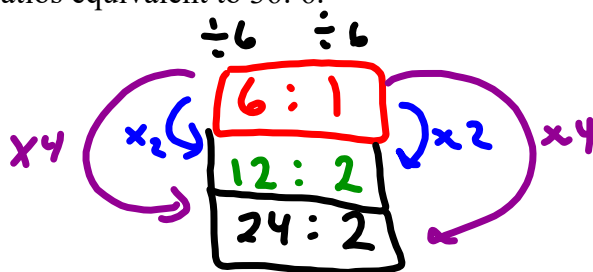
A ratio is in simplest form when its terms have no common factors.

Examples

1. Write 3 ratios equivalent to 2:5.



2. Write 3 ratios equivalent to 36:6.



3. Construction kits come in different sizes. The regular kit contains 120 long rods, 80 short rods and 40 connectors. List 3 other kits that could be created with the same ratio of rods and connectors.

	Long Rods	:	Short Rods	:	Connectors
	120	:	80	:	40
1 st →	12	:	8	:	4
2 nd →	6	:	4	:	2
3 rd →	3	:	2	:	1

Examples

1. Write 3 ratios equivalent to 2:5.

$$4:10, 20:50, 8:20$$

2. Write 3 ratios equivalent to 36:6.

$$6:1, 12:2, 18:3$$

$$360:60, 24:4, 72:12$$

3. Construction kits come in different sizes. The regular kit contains 120 long rods, 80 short rods and 40 connectors. List 3 other kits that could be created with the same ratio of rods and connectors.

6:4:2 long : short : connectors
 12:8:4
 120:80:40

$$120 : 80 : 40$$

$$12 : 8 : 4$$

$$6 : 4 : 2$$

$$60 : 40 : 20$$

Class/Homework

Homework pg. ~~253~~ 274 # 4-11 (you do not need tables for 5-7)

5 b

6 b

7 b

8 a b c d

9 a b c d

10 a b c d