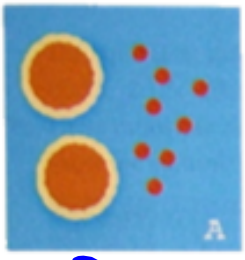
## Grade 8 Warm Up

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




Pep : Pizza
8 : 2
÷2 ÷2
4 : 1


Pep : Pizza
9 : 3
÷3 ÷3
3 : 1


Pep : Pizza
5 : 2
5 to 2

## Mental Math

1) 3500 x 20
39 x 2 = 78
70 000

2) (-8) – (+5)
add opp
(-8) + (-5)
(-13)

2) $6.93 + $5.98
7¢ too much
2¢ too much
6 + 5 = 11
+2
≈ 13
subtract 9¢
$12.91

3) 3.5 x 4
double half
7 x 2
14

4) 454 x 100
45 400

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 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 $\frac{19}{20} = \frac{95}{100}$ 95%

b) 12:15 $\frac{12}{15} = \frac{4}{5} = \frac{80}{100}$ 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 → red : green

b) 7 : 5 → blue : green

c) 5 : 15 → green : all

d) 3 : 5 : 7 → red : green : blue

e) 3 : 12 → red to green and blue

7a) 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%

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 or 46.2%

(d) 2 boys leave

new ratio boys to students percent

10 : 24 $\frac{10}{24}$ 0.417 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

5r, 3g, 2o, 3p

15 : 24

(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

12(a) explain 2/7 as a ratio

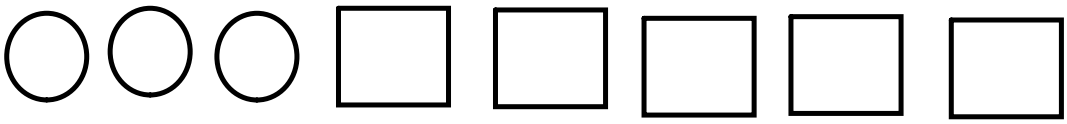
2 out of 7

(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 ingrediants

11 cups

(b) oranges to apples

3 : 2

mayonnaise to macaroni

2 : 3

1

apples to mayonnaise to celery

2 : 2 : 1

(c) apples and oranges to total ingredients 5 : 11 fraction $\frac{5}{11}$ 0.455 percent 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 4 : 10 fraction $\frac{4}{10}$ percent 40%

15.

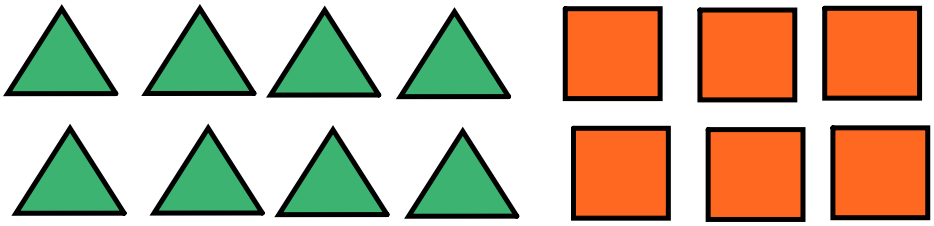
# Equivalent Ratios

How do you find equivalent fractions?

What is the ratio of triangles to squares?

Triangles to squares

4 to 3 for every 4 triangles there is 3 squares



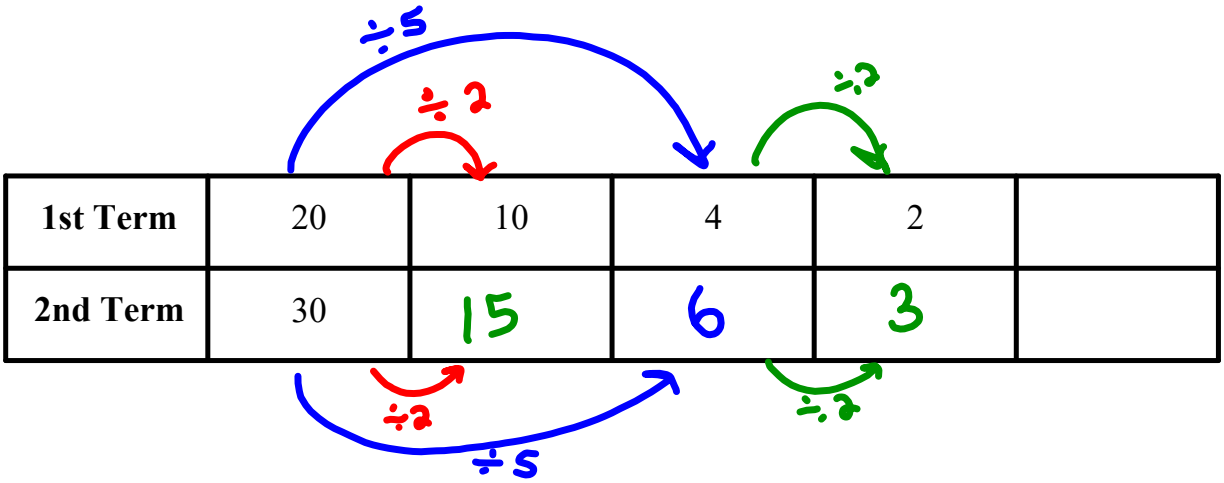
Triangles to squares

8 to 6

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 | |

Three equivalent ratios of 20:30 are:

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

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

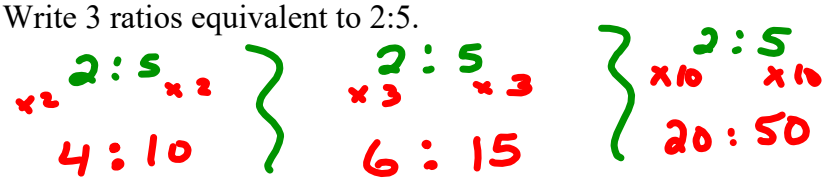
21:14

÷7 ÷7

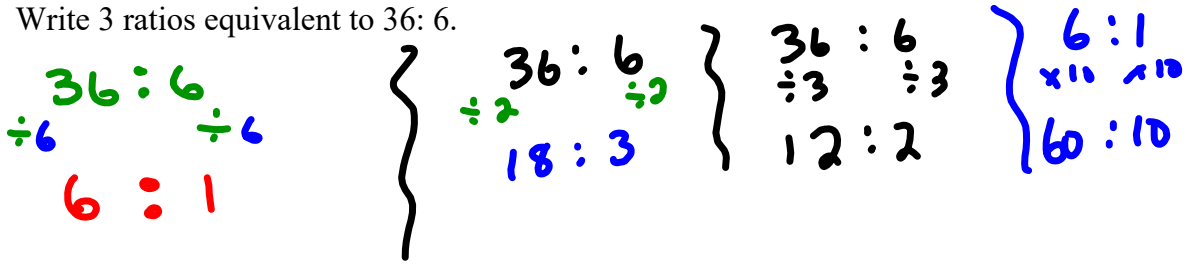
3 : 2

Examples

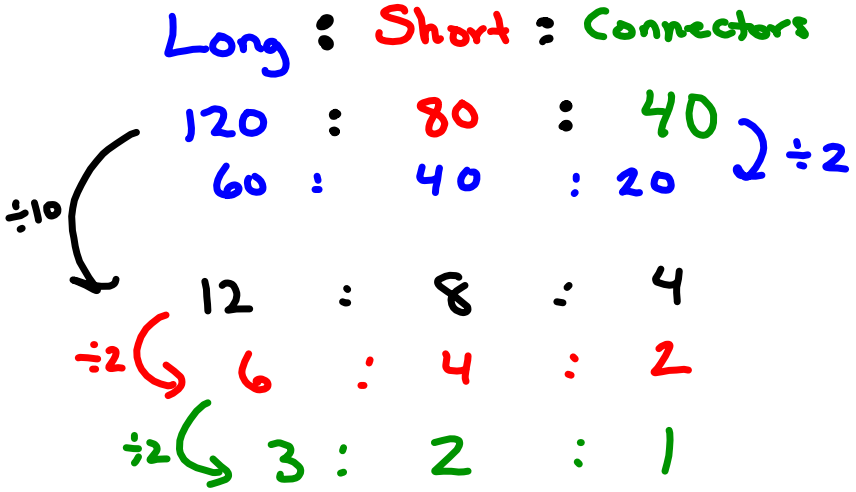
1. Write 3 ratios equivalent to 2:5.




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.



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
12:8:4
1200:800:400

long : short : connectors
120 : 80 : 40

12 : 8 : 4
6 : 4 : 2
60 : 40 : 20

# Class/Homework

Homework pg. 273-274 # 4-11 (you do not need tables for 5-7)

5) a b
6 a) b
7 a b
8 a b
9 a b
10 a b

5a) 1 : 2 (×2, ×3, ×4)