

KEY

Date: _____

2.1 Two-Term and Three-Term Ratios



A ratio can be used to compare the height of the stork with the enlarged stork:

stork : enlarged stork

2 cm : 4 cm

: 2 : 4

1 : 2

Two-Term Ratios



Compare the number of clubs to hearts in a ratio using:

a) words

8 to 6

↕

4 to 3

b) ratio notation

8 : 6

↕

4 : 3

c) a fraction

$\frac{8}{6} \Rightarrow \frac{4}{3}$

A two-term ratio is:
a ratio made up of two numbers

note: the fraction can be written in lowest terms
Rewrite each ratio in lowest terms:

a) words

4 to 3

b) ratio notation

4 : 3

c) a fraction

$\frac{4}{3}$

What are some other ratios we can write using the diagram shown?

diamonds : hearts

diamonds : total

hearts : diamonds

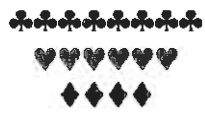
diamonds : clubs

diamonds : non-diamonds

hearts : clubs

etc.

Three-Term Ratios



A ratio can compare more than two things at once:

Write the ratio of clubs to hearts to diamonds in:

A three-term ratio is:

a ratio made up of three numbers

a) words

8 to 6 to 4

↕

4 to 3 to 2

b) ratio notation

8 : 6 : 4

↕

4 : 3 : 2

We can still convert the ratio to lowest terms.

Part-to-Part Ratio				Part-to-Whole Ratio
C:H	H:C	D:C	♣♣♣♣♣♣♣♣	clubs: total
C:D	H:D	D:H	♥♥♥♥♥♥♥♥	hearts: total
C:NC	H:NH	D:ND	♦♦♦♦	diamonds: total

Example:

Tamara has a recipe for fruit punch:

	Orange	Raspberry	Lime	Total
Juice (cans)	3	2	1	6
Water (cans)	9	6	3	18
Total Punch (cans)				24

Fruit Punch:

3 cans frozen orange juice concentrate
2 cans frozen raspberry concentrate
1 can lime juice concentrate

Directions:

For each can of concentrate, add 3 cans of water

- a) What is the ratio of orange juice to lime juice concentrate?
(express the ratio in two different ways)

3 to 1 3:1 $\frac{3}{1}$

- b) What is the ratio of water to juice concentrate?

18 to 6 18:6 $\frac{18}{6} \Rightarrow \frac{3}{1}$
 \Downarrow \Downarrow
 3 to 1 3:1

- c) How many cans of punch does the recipe make?

24

- d) What is the ratio of orange, raspberry and lime juice concentrate to total punch?
Express your answer as a ratio, decimal and a percent

RATIO			DECIMAL	PERCENT
6 to 24	6:24	$\frac{6}{24} = \frac{1}{4}$	$\frac{1}{4} = $ 0.25	$0.25 \times 100\%$
\Downarrow	\Downarrow			$= $ 25%
1 to 4	1:4			

$\underbrace{\hspace{15em}}_{3+2+1=6}$ $\underbrace{\hspace{10em}}_{24}$

Rupert has a piggy bank that contains 5 Loonies, 10 Quarters and 20 other coins.

a) What is the ratio of Loonies to total coins?

5 $5 + 10 + 20 = 35$

$5 : 35$
↓
 $1 : 7$



b) What is the ratio of quarters to loonies?

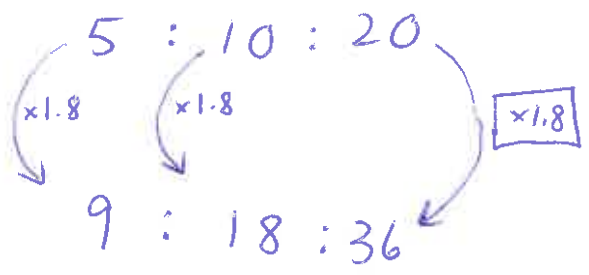
10 5

$10 : 5$
↓
 $2 : 1$

c) He keeps his coins in the same ratio, and has 36 other coins. How many loonies and quarters will he have?

$L : Q : OC$
 $5 : 10 : 20$
 $\square : \square : 36$

USE PROPORTIONAL REASONING.



$20 \times \square = 36$
 $36 \div 20 = \square$
 $1.8 = \square$