

Wednesday 17th June

Year 5/6: Introducing the Ratio Symbol

Introduction

Zack discovered these footprints in the forest.



Complete the statements.

For every three footprints with four toes, there are ____ footprints with three toes.

For every two footprints with two toes, there are three footprints with ____ toes.

Introduction

Zack discovered these footprints in the forest.



Complete the statements.

For every three footprints with four toes, there are **five** footprints with three toes.

For every two footprints with two toes, there are three footprints with **four** toes.

Varied Fluency 1

True or false? The ratio of cupcakes with sprinkles to cupcakes with a cherry is 3:1.



Varied Fluency 1

True or false? The ratio of cupcakes with sprinkles to cupcakes with a cherry is 3:1.



False; it is 2:3.

Varied Fluency 2

Match the statements that mean the same thing.

5:2 oranges to
apples

2:5 oranges to
apples

5:1 oranges to
apples

For every 2 apples,
there are 5
oranges.

For every 5
oranges, there is 1
apple.

For every 2
oranges, there are
5 apples.

Varied Fluency 2

Match the statements that mean the same thing.

5:2 oranges to
apples

For every 2 apples,
there are 5
oranges.

2:5 oranges to
apples

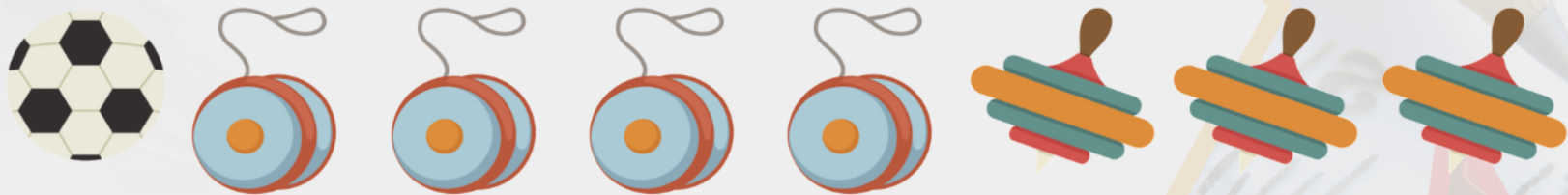
For every 5
oranges, there is 1
apple.

5:1 oranges to
apples

For every 2
oranges, there are
5 apples.

Varied Fluency 3

Write a statement to describe the ratio 4:1 shown below.



Varied Fluency 3

Write a statement to describe the ratio 4:1 shown below.



There are 4 yoyos for every football.

Varied Fluency 4

Circle the odd one out by matching the ratios to the description.



10:4

2:10:4

4:2:10

Speckled fish to striped
fish to plain fish

Striped fish to plain fish

Varied Fluency 4

Circle the odd one out by matching the ratios to the description.



10:4

2:10:4

4:2:10

Speckled fish to striped
fish to plain fish

Striped fish to plain fish

Reasoning 1

This machine turns sentences into ratios.

**For every 5 red cars,
there is 1 blue car.
There are three
times as many white
cars as blue cars.**



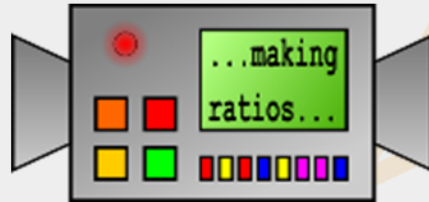
2:3:5

Could this ratio be correct? Convince me.

Reasoning 1

This machine turns sentences into ratios.

**For every 5 red cars,
there is 1 blue car.
There are three
times as many white
cars as blue cars.**



2:3:5

Could this ratio be correct? Convince me.

No because...

Reasoning 1

This machine turns sentences into ratios.

For every 5 red cars,
there is 1 blue car.
There are three
times as many white
cars as blue cars.



2:3:5

Could this ratio be correct? Convince me.

No because the ratio of red cars to blue cars to white cars would be 5:1:3.

Reasoning 2

Each child's statement is correct.



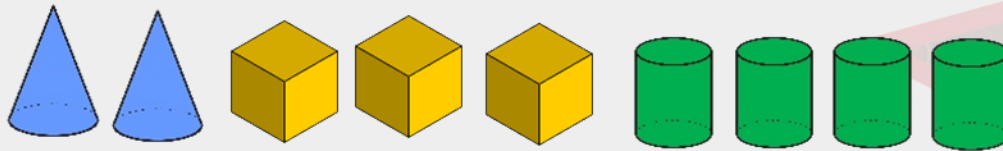
Kimiko

The ratio is 4:3.

The fraction is $\frac{2}{9}$.



Sasha



Explain how this is possible.

Reasoning 2

Each child's statement is correct.



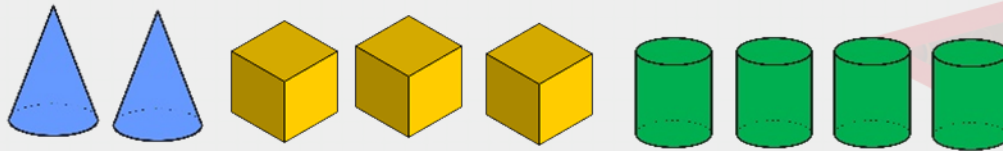
Kimiko

The ratio is 4:3.



Sasha

The fraction is $\frac{2}{9}$.



Explain how this is possible.

Kimiko is describing the ratio...
Sasha is describing what proportion...

Reasoning 2

Each child's statement is correct.



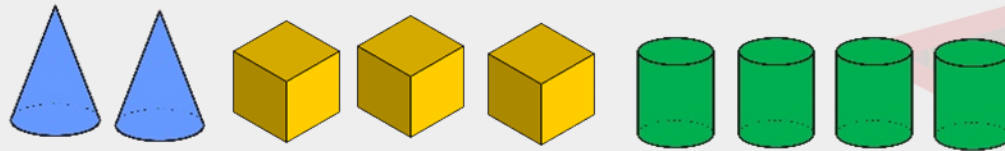
Kimiko

The ratio is 4:3.

The fraction is $\frac{2}{9}$.



Sasha



Explain how this is possible.

**Kimiko is describing the ratio of cylinders to cubes.
Sasha is describing what proportion of the shapes are cones.**

Problem Solving 1

In a box of 15 chocolates, $\frac{3}{5}$ are milk chocolate. The rest are white or dark chocolate.

Write down three solutions for the possible ratio of white to milk to dark chocolate.

Draw counters to support your answers.

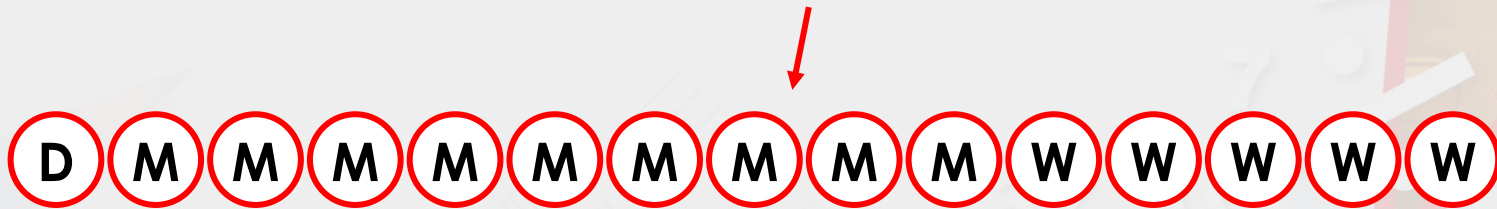
Problem Solving 1

In a box of 15 chocolates, $\frac{3}{5}$ are milk chocolate. The rest are white or dark chocolate.

Write down three solutions for the possible ratio of white to milk to dark chocolate.

Draw counters to support your answers.

Possible answers include: 1:9:5, 2:9:4, 3:9:3, 4:9:2, 5:9:1



Year 5 and Year 6 Developing

2a. Match the cards to the correct image.

A. 1:9 pens to pencils



B. 4:1 pens to pencils



C. 3:2 pencils to pens



6 VF

2b. Match the cards to the correct image.

A. 4:1 butterflies to snails



B. 1:4 butterflies to snails



C. 1:3 snails to butterflies



6 VF

3a. Write a statement to describe the ratio of 4:1 shown below.



6 VF

3b. Write a statement to describe the ratio of 3:2 shown below.



6 VF

4a. Circle the odd one out by matching the ratios to the description.



1:5

striped sock to spotty sock

5:1

spotty sock to striped sock

5:2

4b. Circle the odd one out by matching the ratios to the description.



2:3

watches to necklaces

3:1

necklaces to watches

3:2

2a. Each child's statement is correct.



Rishon

The ratio is 4:1.



Riva

The ratio is 1:4.



Explain how this is possible.



6 R

2b. Each child's statement is correct.



Yussuf

The ratio is 3:5.



Mariam

The ratio is 5:3.



Explain how this is possible.



6 R

3a. In a purse of 9 coins, some are silver and the rest are copper. There are more silver coins than copper coins.

Write down 3 solutions for the possible ratio of silver to copper coins.

Draw counters to support your answers.

3b. In a 10-piece fruit basket, there are only apples and pears. There are more apples than pears.

Write down 3 solutions for the possible ratio of pears to apples.

Draw counters to support your answers.

Year 6 Expected

5a. True or false? The ratio of bananas to apples is 4:3.



6 VF

5b. True or false? The ratio of snails to butterflies is 2:4.



6 VF

6a. Match the statements that mean the same thing.

A. 1:2 red counters to blue counters

1. There are twice as many blue counters as red counters.

B. 3:2 red counters to blue counters

2. For every 2 blue counters, there are 3 red counters.

C. 2:3 red counters to blue counters

3. For every 2 red counters, there are 3 blue counters.



6 VF

6b. Match the statements that mean the same thing.

A. 3:7 pens to pencils

1. There are four times as many pens as pencils.

B. 7:3 pens to pencils

2. For every 7 pens, there are 3 pencils.

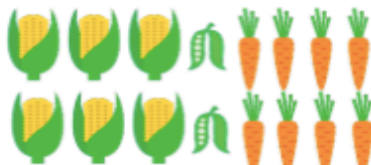
C. 1:4 pencils to pens

3. For every 3 pens, there are 7 pencils.



6 VF

7a. Write a statement to describe the ratio of 6:8 shown below.



7b. Write a statement to describe the ratio of 2:4 shown below.



5a. Each child's statement is correct.



Cole

The ratio is 4:3.



Elise

The fraction is $\frac{4}{13}$.



Explain how this is possible.



6 R

5b. Each child's statement is correct.



Eli

The ratio is 5:1.



Verity

The fraction is $\frac{1}{8}$.



Explain how this is possible.



6 R

6a. In a bag of 10 sweets, $\frac{3}{5}$ are red. The rest are green or blue.

Write down 3 solutions for the possible ratio of red to blue to green sweets.

Draw counters to support your answers.

6b. In a class of 30 children, $\frac{2}{3}$ are having sandwiches for lunch. The rest are having cook's choice or jacket potato.

Write down 3 solutions for the possible ratio of jacket potato to sandwiches to cook's choice.

Draw counters to support your answer.

Year 6 Greater Depth

9a. True or false? The ratio of rings to watches to necklaces is 2:1:3.



6 VF

9b. True or false? The ratio of cars to buses to lorries is 3:2:1.



6 VF

10a. Match the statements that mean the same thing.

A. 1:3:5 apples to oranges to pears

1. For every apple, there are 2 oranges and 4 pears.

B. 5:3:1 apples to pears to oranges

2. For every apple, there are 5 pears and 3 oranges.

C. 1:2:4 apples to oranges to pears

3. For every orange, there are 5 apples and 3 pears.



6 VF

10b. Match the statements that mean the same thing.

A. 3:5:1 teas to coffees to hot chocolates

1. For every tea, there are 5 hot chocolates and 4 coffees.

B. 1:4:5 teas to coffees to hot chocolates

2. For every tea, there are 5 hot chocolates and 3 coffees.

C. 5:1:3 hot chocolates to teas to coffees

3. For every hot chocolate, there are 3 teas and 5 coffees.



6 VF


11a. Write a statement to describe the ratio of 1:3:4 shown below.




11b. Write a statement to describe the ratio of 4:1:3 shown below.



8a. Each child's statement is correct.

 The ratio is 2:3.

 The fraction is $\frac{1}{3}$.





Explain how this is possible.



6 R

8b. Each child's statement is correct.

 The ratio is 3:5.

 The fraction is $\frac{1}{2}$.



Explain how this is possible.



6 R

9a. In a class of 30 children, $\frac{3}{10}$ have a pet dog. The rest either have a pet cat or have no pets. More children have a pet than don't have a pet.

Write down 3 solutions for the possible ratio of dogs to cats to none.

Draw counters to support your answers.

9b. In my pencil case of 15 items, $\frac{1}{3}$ are handwriting pens. The rest are either felt tip pens or pencils. There are more pens than pencils.

Write down 3 solutions for the possible ratio of pencils to handwriting pens to felt tip pens.

Draw counters to support your answers.