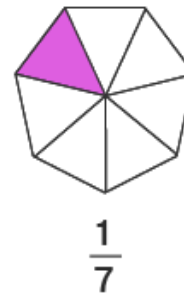
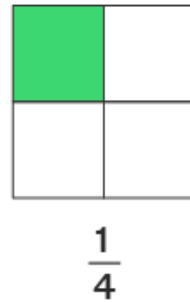
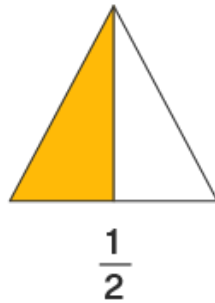


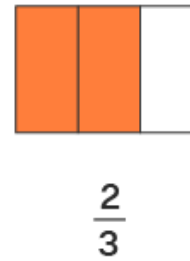
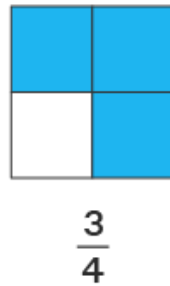
Fractions

Maths 28.03.2022

Unit Fractions



Non-Unit Fractions



28.03.2022

Morning Task

Use the column method to solve:

$$32 + 25 =$$

$$56 + 38 =$$

$$57 - 25 =$$

$$61 - 19 =$$

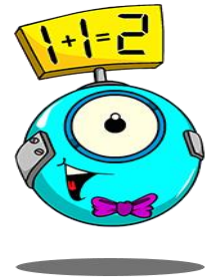
$$10 \times 5 =$$

$$35 \div 5 =$$

$$\frac{1}{2} \text{ of } 30 =$$

$$\frac{1}{4} \text{ of } 12 =$$

$$\frac{1}{3} \text{ of } 15 =$$



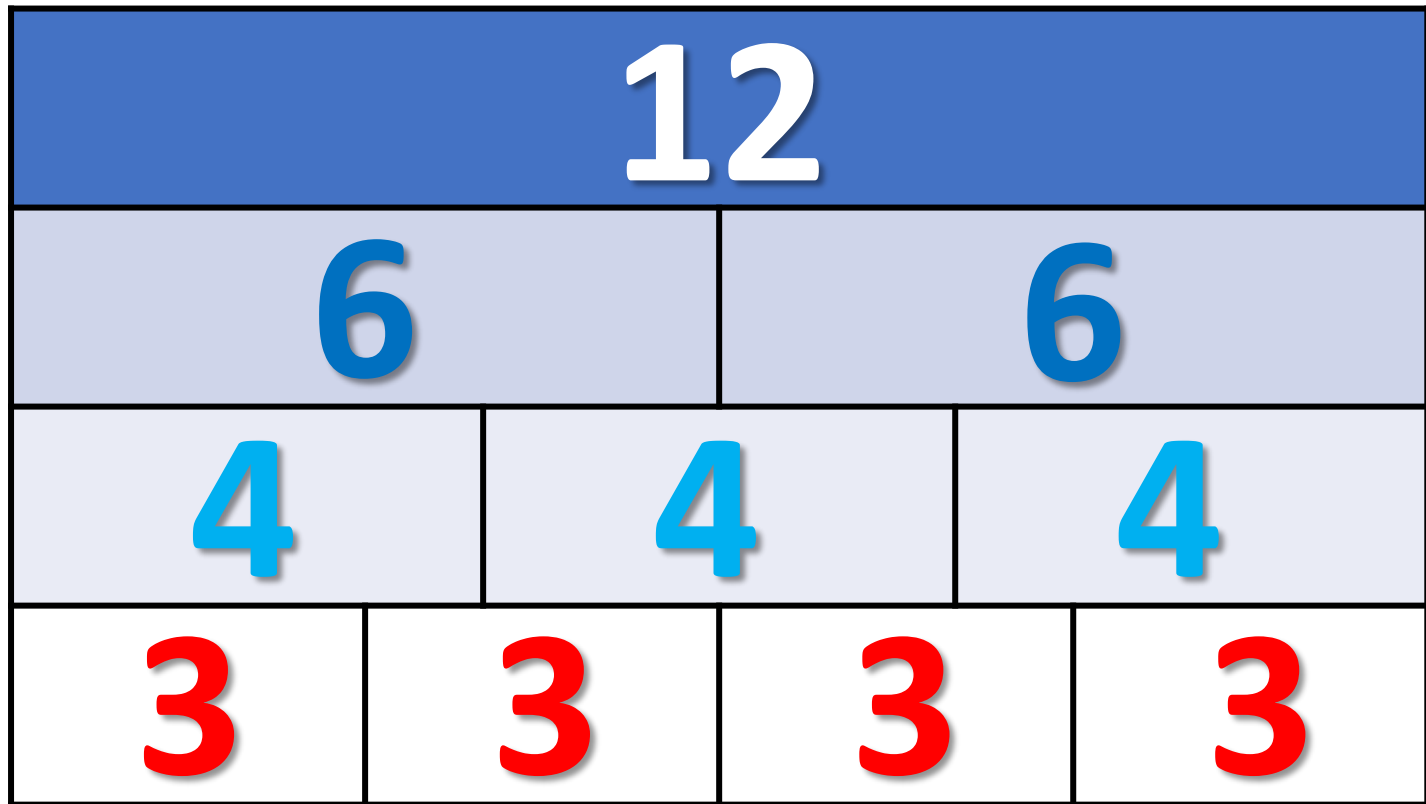
Create two fact families:

One + and -

One \times and \div

Anchor Task

Find one half, one third and one quarter of 12.



Review: Unit fractions

Can you write a fraction?

Can you name the different parts?

numerator



$$\frac{1}{4}$$

denominator



The denominator tells us...

how many equal groups we split the whole into.

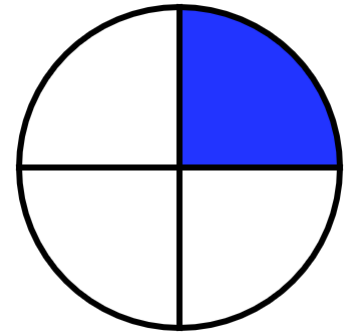
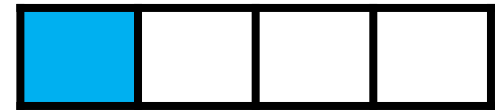
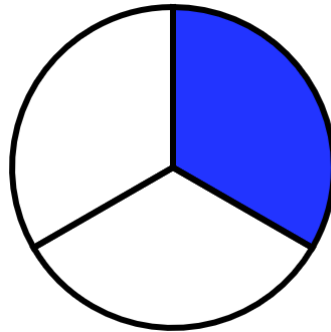
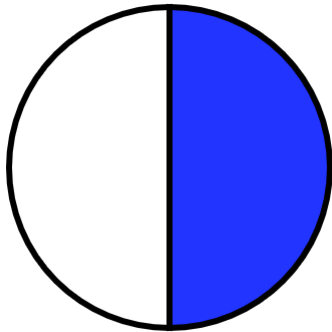
The numerator tells us...

how many parts of the whole we have.

Explore: Unit fractions

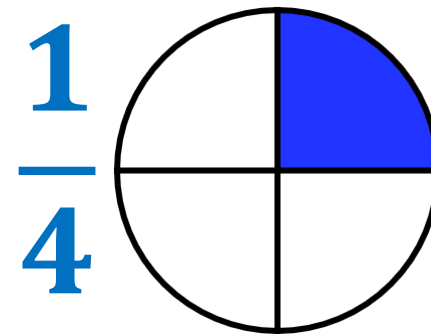
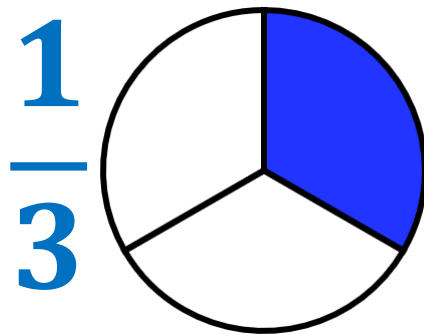
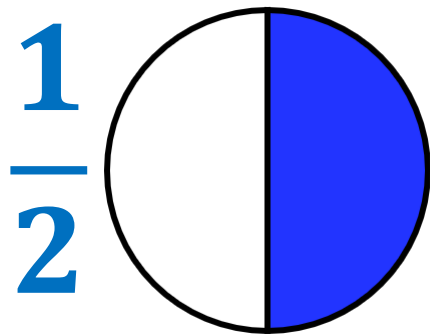
What fractions are shown below?

Explain how you know.



Explore: Unit fractions

What is the same and what is different about these fractions?



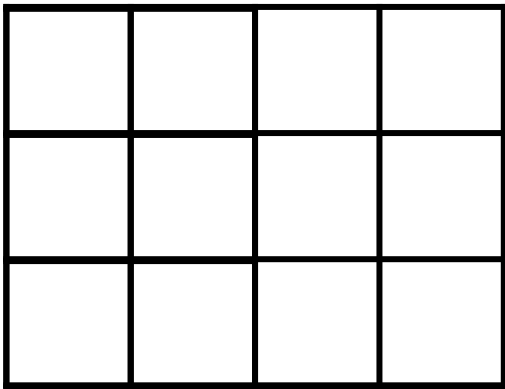
These are all unit fractions.

Unit fractions are 1 part of the whole.

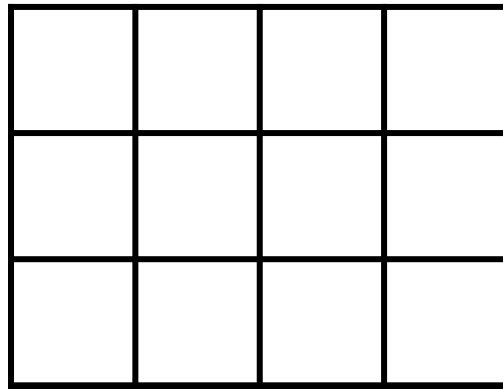
Independent Task: Unit fractions

Colour the 12 squares to match the unit fractions.

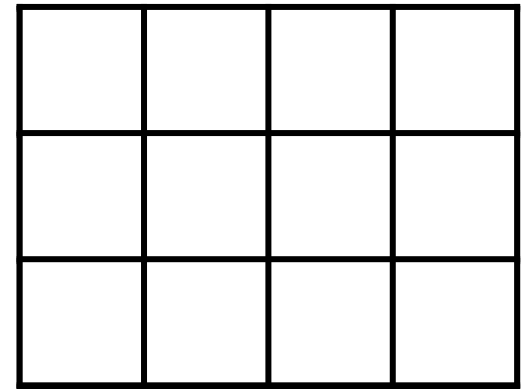
Which is the largest and smallest fraction?



1



1



1

Remember to work out $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$ of 12 first!

2

3

4

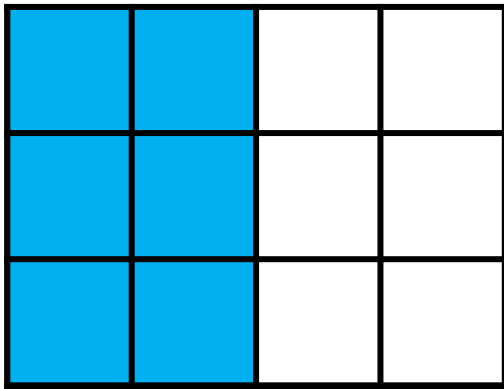
What do you notice about the denominator and the size of the fraction?



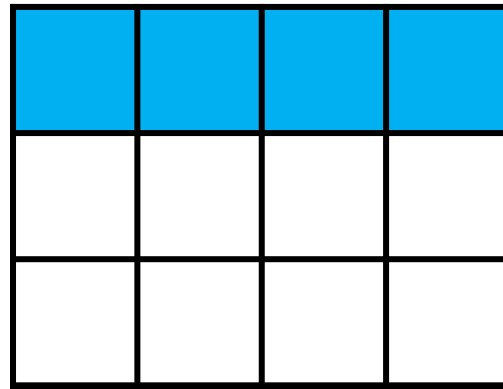
Independent Task: Unit fractions

Colour the 12 squares to match
the unit fractions.

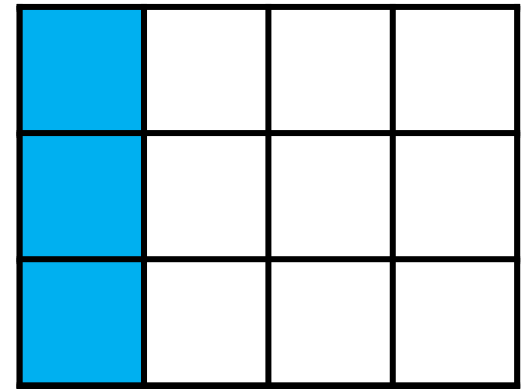
Which is the largest and smallest fraction?



$$\frac{1}{2}$$



$$\frac{1}{3}$$



$$\frac{1}{4}$$

Did you notice that the bigger the denominator, the less squares you coloured in. Why?

Guided Task: Unit fractions

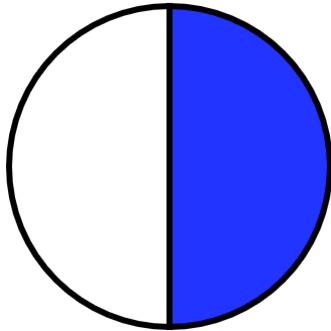
Do you agree with Hannah?

Explain using shapes and pictures.

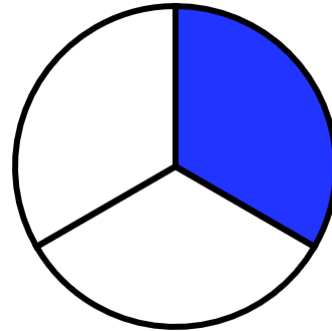


When the denominator gets larger,
the fraction gets smaller.

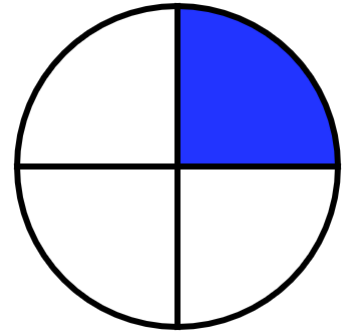
$\frac{1}{2}$



$\frac{1}{3}$



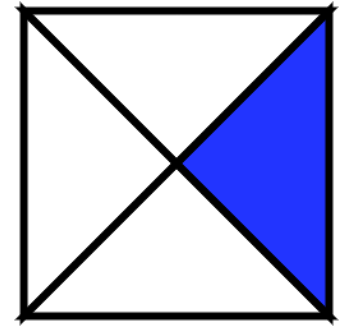
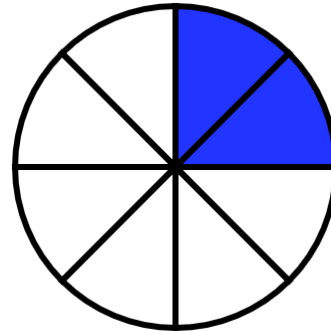
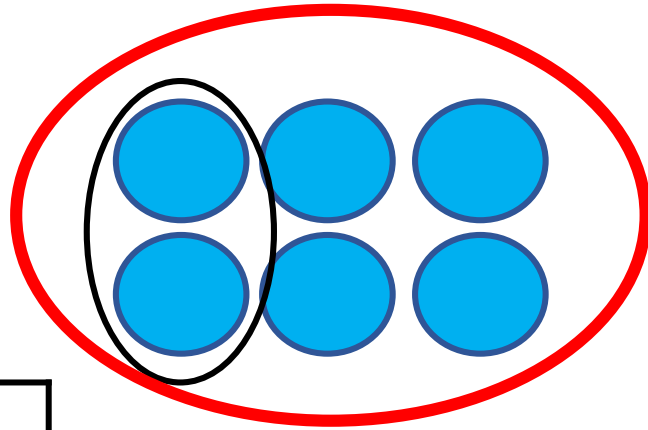
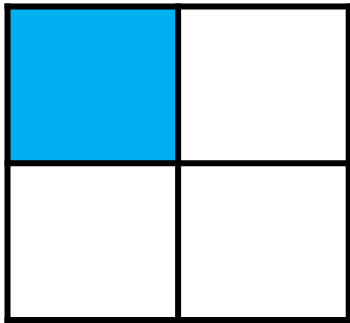
$\frac{1}{4}$



Guided Task: Unit fractions

Which is the odd one out?

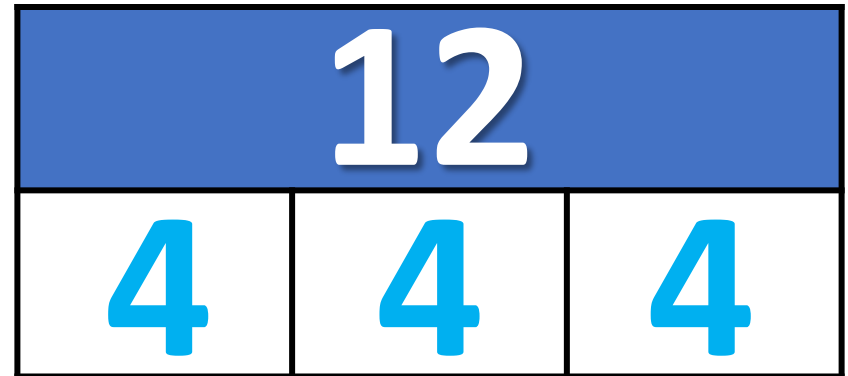
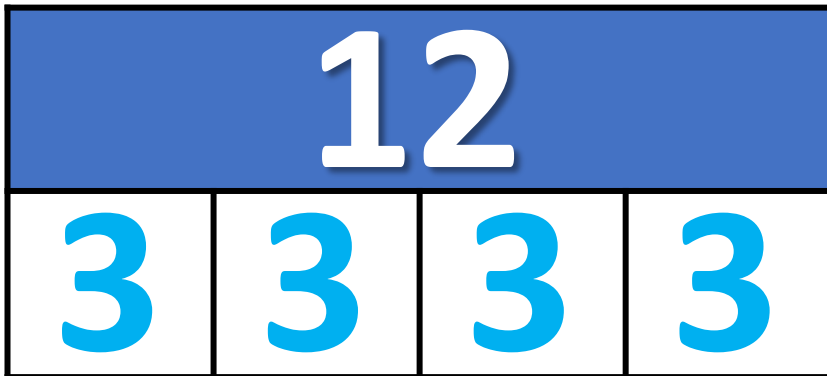
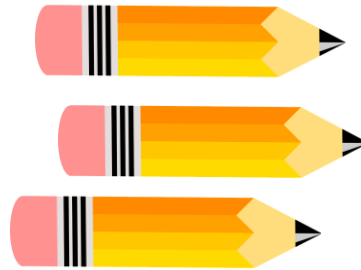
Can you explain why?



The others all show $\frac{1}{4}$. This is $\frac{1}{3}$.

Guided Task: Unit fractions

Here is $\frac{1}{4}$ of a total of pencils.
What is the total number of pencils?

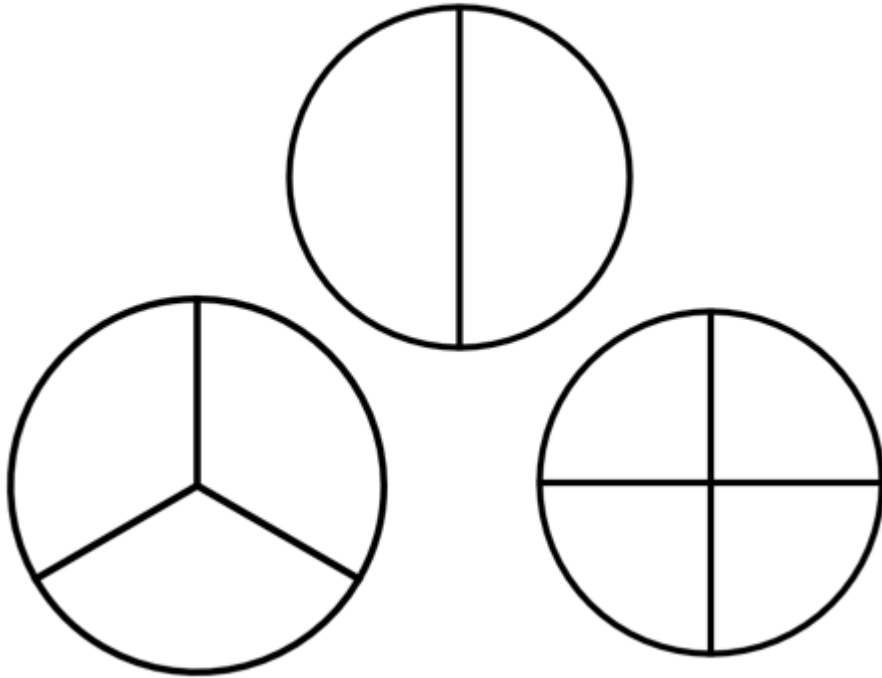


What is $\frac{1}{3}$ of the total?

Independent Task: Unit fractions

Varied Fluency 1

Colour the shapes to create unit-fractions.



Write each fraction.

Reasoning 1 True or false?

Can you prove it?

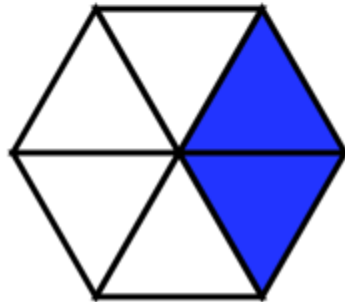
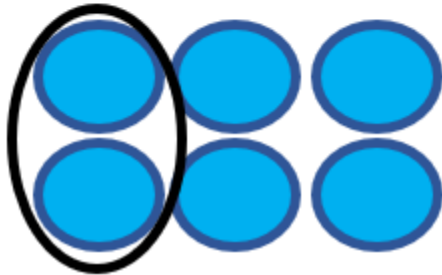
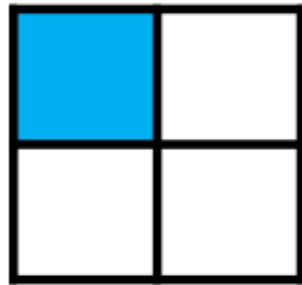
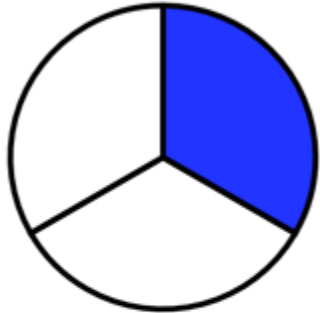
$\frac{1}{4}$ of the cakes is 4 cakes.



Independent Task: Unit fractions

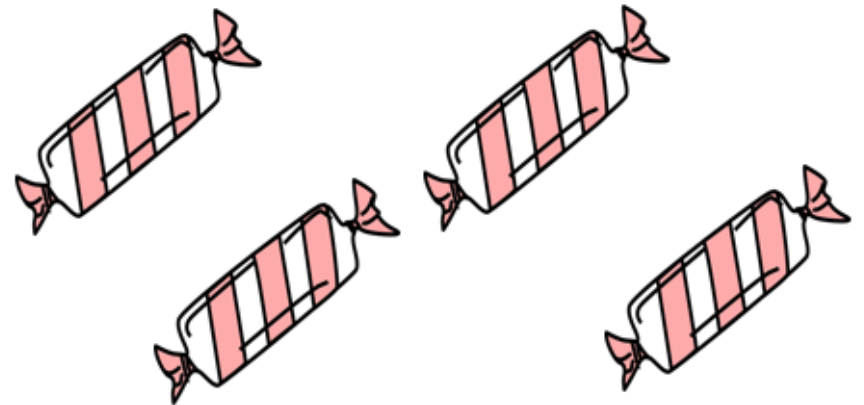
Reasoning 2

Which is the odd one out?



Problem Solving 1

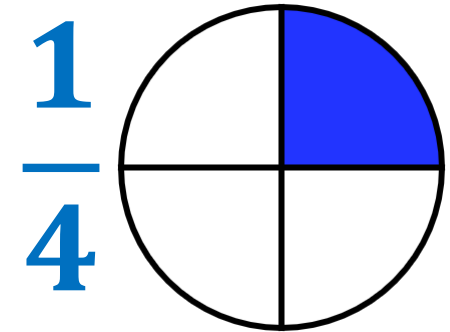
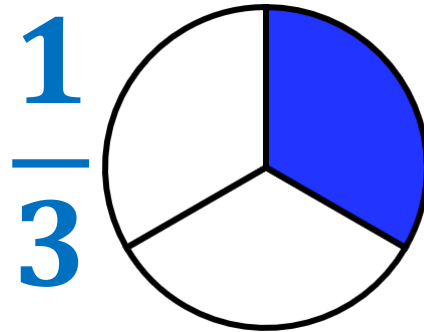
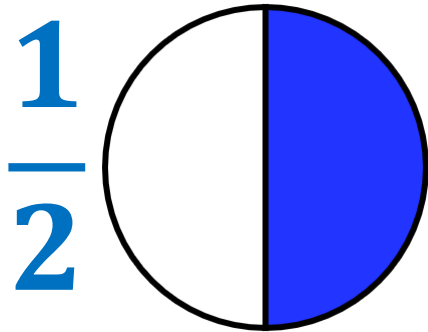
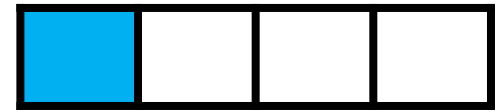
Here is $\frac{1}{3}$ of a total.
What is the total number of sweets?



What is $\frac{1}{4}$ of the total?

Review

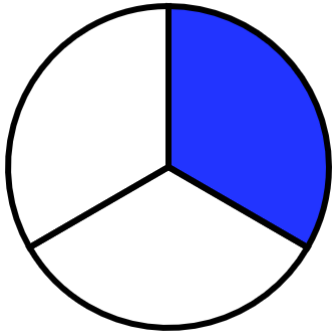
What did we learn?



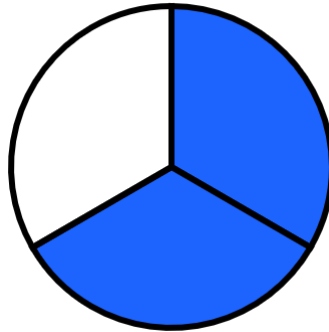
**These are all unit fractions.
Unit fractions are 1 part of the whole.**

Explore: Non-unit fractions

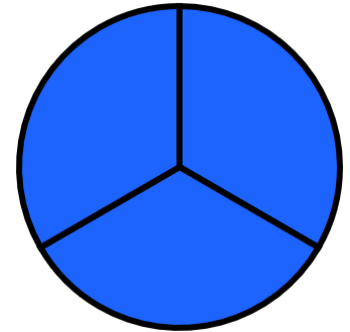
What fractions are shown below?
What is the same? What is different?



$$\frac{1}{3}$$



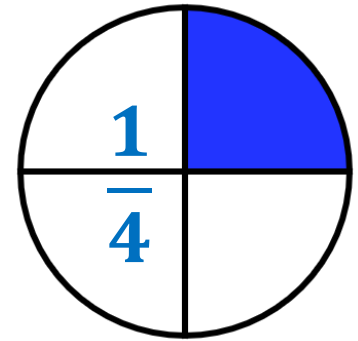
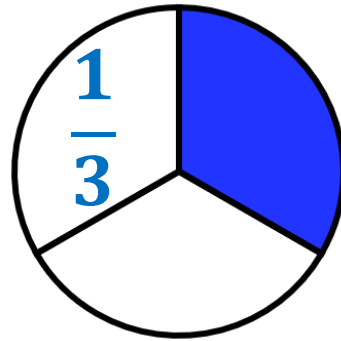
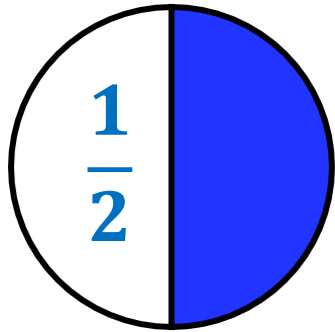
$$\frac{2}{3}$$



$$\frac{3}{3}$$

Explore: Non-unit fractions

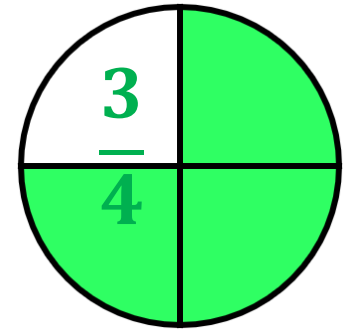
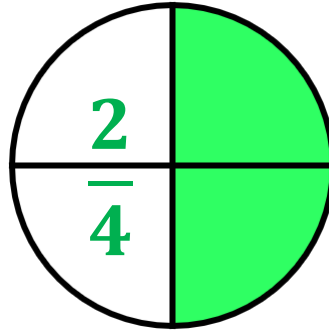
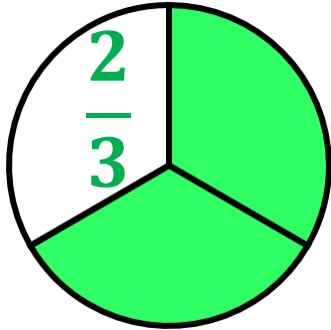
Unit fractions



In a unit fraction the numerator is 1.

Explore: Non-unit fractions

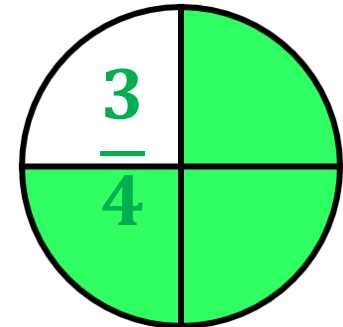
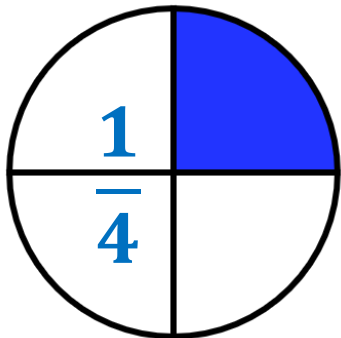
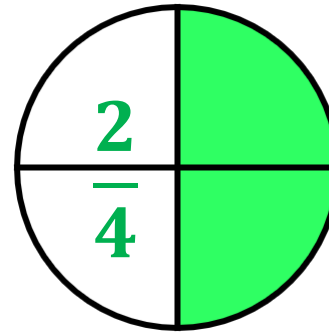
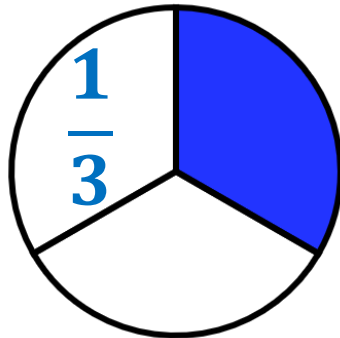
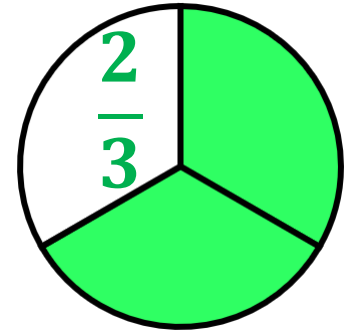
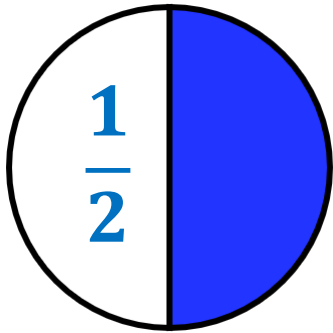
Unit fractions



In a non-unit fraction the numerator is more than 1.

Explore: Non-unit fractions

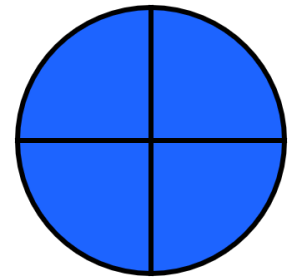
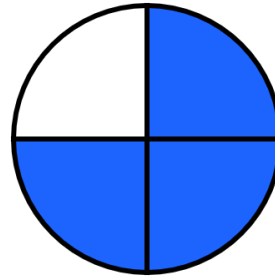
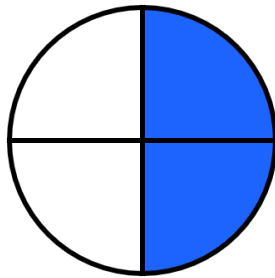
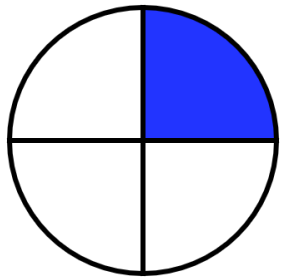
What do you notice?



What's the same? What's different?

Explore: Non-unit fractions

What fractions are shown below?
What is the same? What is different?



$$\frac{1}{4}$$

$$\frac{2}{4}$$

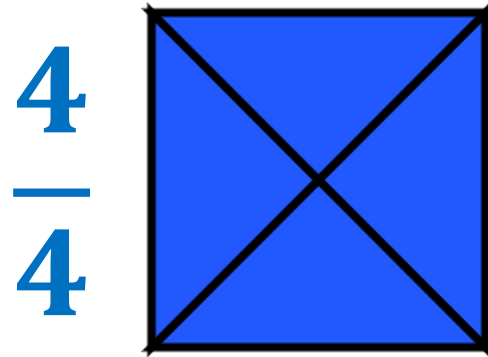
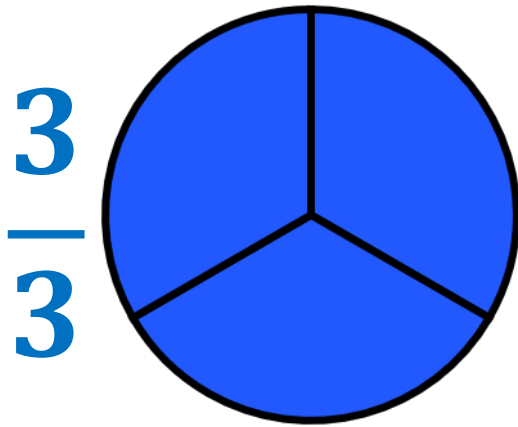
$$\frac{3}{4}$$

$$\frac{4}{4}$$

Explore: Non-unit fractions

What fractions are shown below?

What is the same about these fractions?



If the numerator and denominator are the same, the fraction equals a whole.

Independent Task: Non-unit fractions

Sort the fractions into the table.

$\frac{2}{4}$ $\frac{2}{2}$ $\frac{1}{3}$ $\frac{2}{4}$ $\frac{3}{3}$ $\frac{1}{2}$ $\frac{1}{4}$ $\frac{2}{3}$

| Unit fractions | Non-unit fractions |
|----------------|--------------------|
| | |

Guided Task: Non-unit fractions

The children each had 4 doughnuts.
How many doughnuts do they have left?

I ate $\frac{3}{4}$



I ate $\frac{2}{4}$



I ate $\frac{1}{4}$



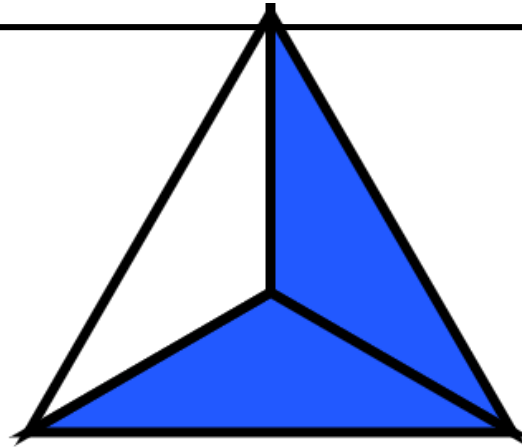
Guided Task: Non-unit fractions

True or false?
Can you prove it?



$\frac{1}{3}$ of the shape
is shaded.

False.
 $\frac{2}{3}$ is shaded.



Non-unit fractions

Use the clues to work out each child's fraction.



Emma

I have a unit fraction.

$$\frac{1}{3}$$

My fraction is four quarters.

Amy

$$\frac{4}{4}$$



Tom

I have two parts shaded.

$$\frac{2}{4}$$



$$\frac{3}{4}$$

$$\frac{1}{3}$$

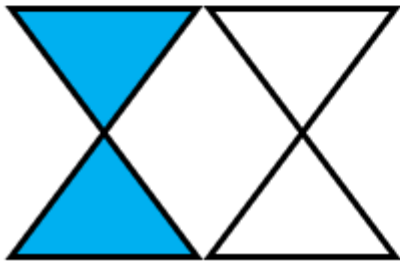
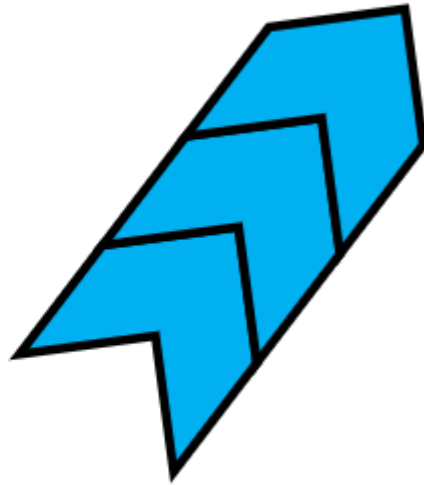
$$\frac{4}{4}$$

$$\frac{2}{4}$$

Independent Tasks: Non-unit fractions

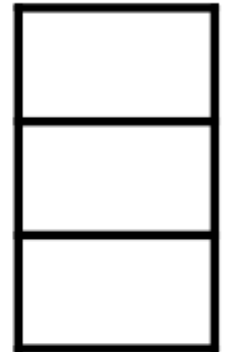
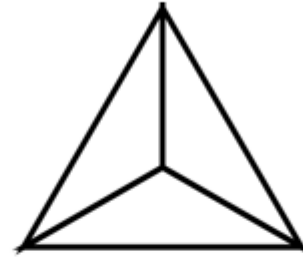
Varied Fluency 1

Write the fraction that is shaded.

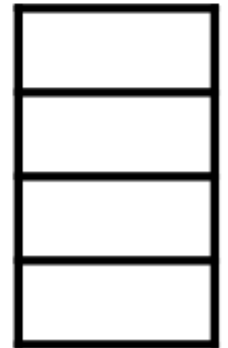
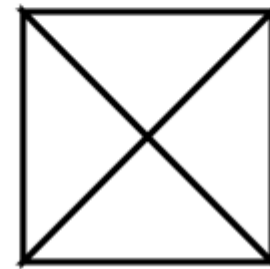
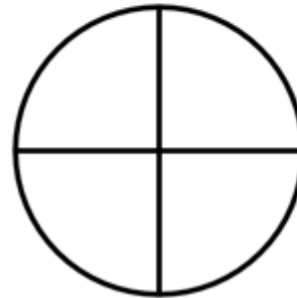


Varied Fluency 2

Shade $\frac{2}{3}$ of each shape.



Shade $\frac{3}{4}$ of each shape.



Independent Tasks: Non-unit fractions

Reasoning 1 True or false?

Can you prove it?

I have shaded $\frac{2}{2}$ of the shape.



Problem Solving 1

Use the clues to work out each child's fraction.

I have two parts shaded.



I have one of four parts shaded.

I have three equal parts all shaded.



$$\frac{3}{3}$$

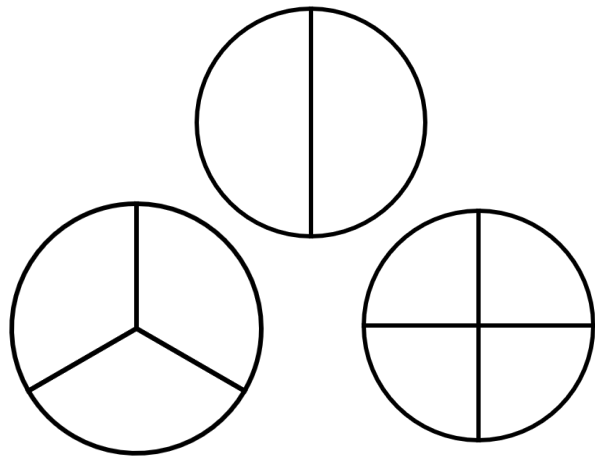
$$\frac{1}{4}$$

$$\frac{3}{4}$$

$$\frac{2}{3}$$

Varied Fluency 1

Colour the shapes to create unit-fractions.



Write each fraction.

Reasoning 1 True or false?

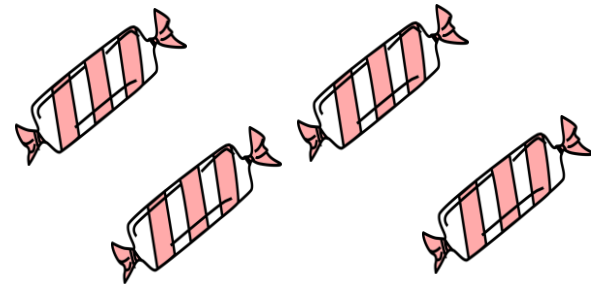
Can you prove it?

$\frac{1}{4}$ of the cakes is 4 cakes.



Problem Solving 1

Here is $\frac{1}{3}$ of a total. What is the total number of sweets?



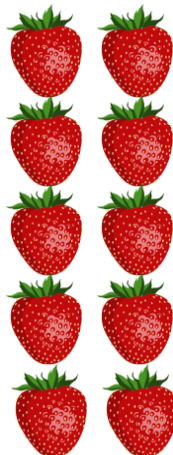
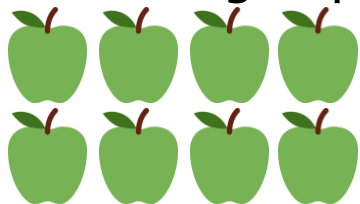
What is $\frac{1}{4}$ of the total?

Varied Fluency 2

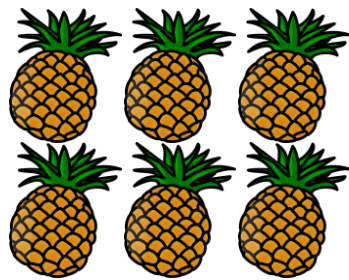
Circle the unit fraction of each group.

$\frac{1}{2}$

$\frac{1}{4}$



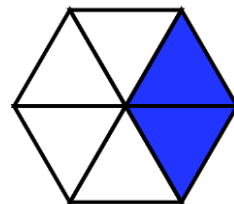
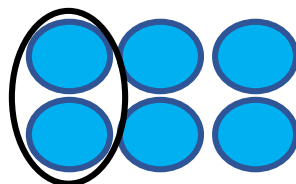
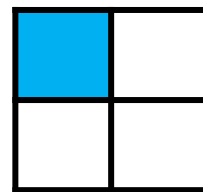
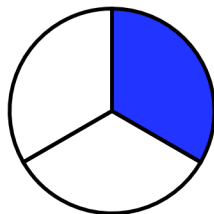
$\frac{1}{3}$



$\frac{1}{3}$

Reasoning 2

Which is the odd one out?



Problem Solving 2

What number is Jill thinking of?

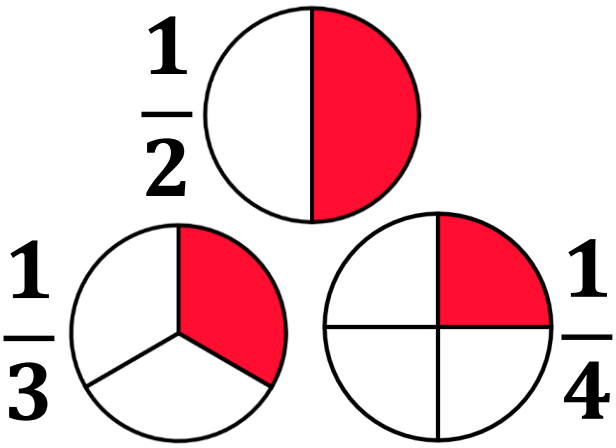
$\frac{1}{2}$ of my number is 12.



What is $\frac{1}{3}$ and $\frac{1}{4}$ of Jill's number?
Use bar models to prove it.

Varied Fluency 1

Colour the shapes to create unit-fractions.



Write each fraction.

Reasoning 1 True or false?

Can you prove it?

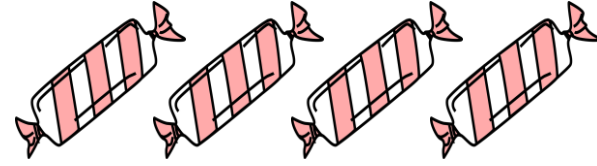
$\frac{1}{4}$ of the cakes is 4 cakes.



**False. $\frac{1}{4}$ of 12 is 3.
4 is $\frac{1}{3}$ of 12.**

Problem Solving 1

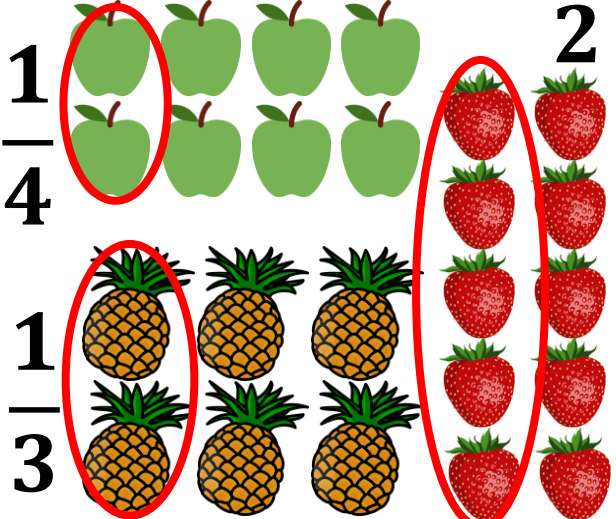
Here is $\frac{1}{3}$ of a total.
What is the total number of sweets?



**Total = 12 sweets
 $\frac{1}{4}$ of 12 = 3**

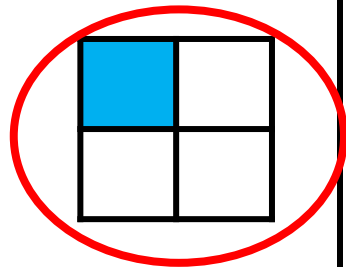
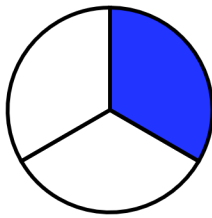
Varied Fluency 2

Circle the unit fraction of each group.

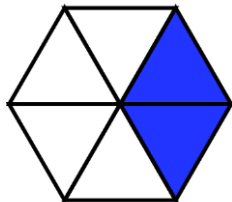
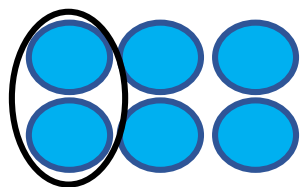


Reasoning 2

Which is the odd one out?



**This shows $\frac{1}{4}$.
All the others show $\frac{1}{3}$.**



Problem Solving 2

What number is Jill thinking of?

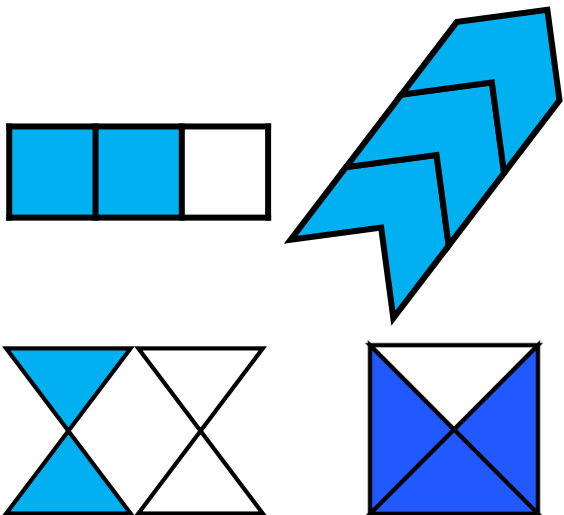
$\frac{1}{2}$ of my number is 12.



**Total = 24 sweets
 $\frac{1}{3}$ of 24 = 8
 $\frac{1}{4}$ of 24 = 6**

Varied Fluency 1

Write the fraction that is shaded.



Reasoning 1 True or false?

Can you prove it?

I have shaded $\frac{2}{2}$ of the shape.



Problem Solving 1

Use the clues to work out each child's fraction.

I have two parts shaded.



I have one of four parts shaded.

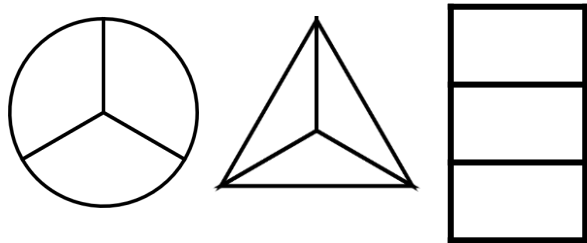
I have three equal parts all shaded.



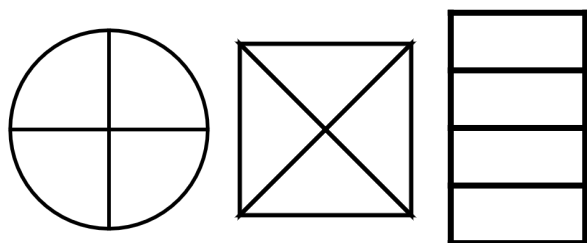
$\frac{3}{3}$ $\frac{1}{4}$ $\frac{3}{4}$ $\frac{2}{3}$

Varied Fluency 2

Shade $\frac{2}{3}$ of each shape.

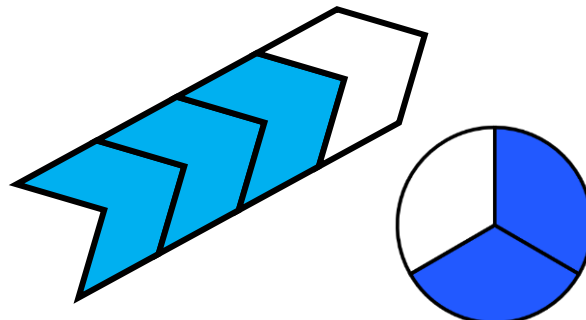
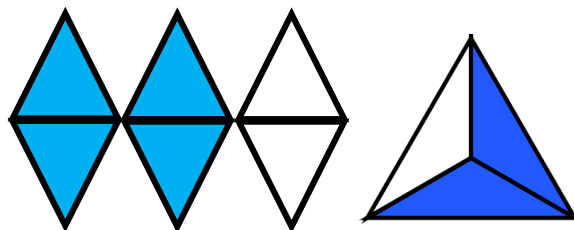


Shade $\frac{3}{4}$ of each shape.



Reasoning 2

Which is the odd one out?



Problem Solving 2

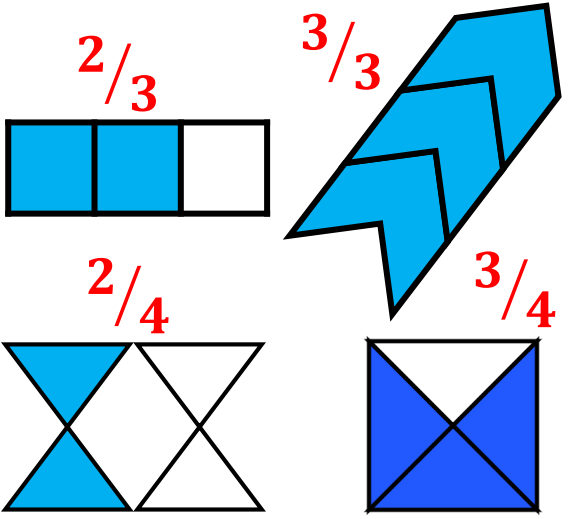
Circle each non-unit fraction.

$\frac{1}{3}$ $\frac{3}{4}$ $\frac{2}{3}$ $\frac{3}{3}$
 $\frac{2}{4}$ $\frac{1}{2}$ $\frac{1}{4}$ $\frac{2}{4}$

Represent each non-unit fraction as a shape or bar model.

Varied Fluency 1

Write the fraction that is shaded.



Reasoning 1 True or false?

Can you prove it?

I have shaded $\frac{2}{2}$ of the shape.



False.
 $\frac{2}{4}$ is shaded



Problem Solving 1

Use the clues to work out each child's fraction.

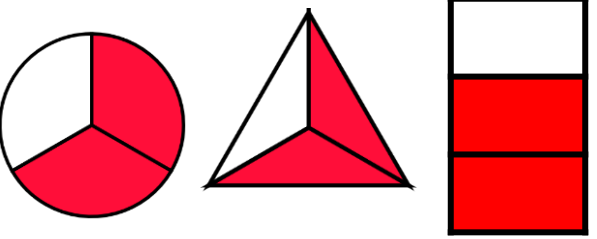
I have two parts shaded. $\frac{2}{3}$

$\frac{1}{4}$ I have one of four parts shaded.

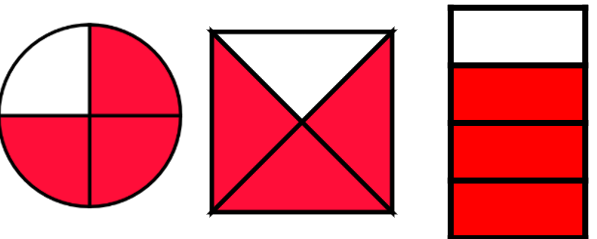
I have three equal parts all shaded. $\frac{3}{3}$

Varied Fluency 2

Shade $\frac{2}{3}$ of each shape.

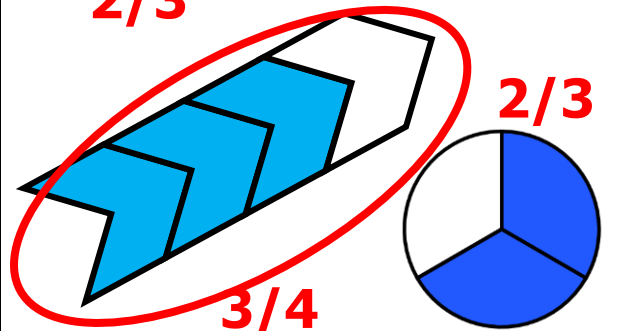
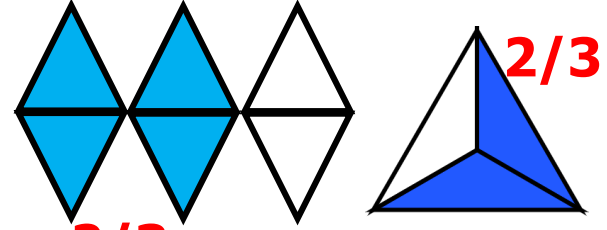


Shade $\frac{3}{4}$ of each shape.



Reasoning 2

Which is the odd one out?



Problem Solving 2

Circle each non-unit fraction.

$\frac{1}{3}$ $\frac{3}{4}$ $\frac{2}{3}$ $\frac{3}{3}$
 $\frac{2}{4}$ $\frac{1}{2}$ $\frac{1}{4}$ $\frac{2}{4}$

Represent each non-unit fraction as a shape or bar model.