

Lesson 9 – Fractions - Unit and Non – Unit Fractions

NC Objective:

Recognise, find, name and write fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.

Resources needed:

Differentiated Sheets
Teaching Slides

Vocabulary:

Fractions, quantity, recognise, unit fraction, non-unit fractions halves, thirds, quarters, denominator, numerator, represent

Children understand the concept of a unit fraction by recognising it as one equal part of a whole. They link this to their understanding of recognising and finding thirds, quarters and halves. Children also need to understand that the denominator represents the number of parts that a shape or quantity is split into.

Key Questions:

How can we represent these unit fractions in different ways?

Why do we call them a unit fraction? Where can we see the unit?

Show me $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ of the model/counters etc. What is the same? What is different?

Which unit fraction is bigger/smaller if the whole is the same?

★ Working Towards

Complete the table.

Fraction	Bar	Words
$\frac{1}{2}$		
$\frac{1}{3}$		
$\frac{1}{4}$		

What fraction of each object is circled?

What fraction of each shape is shaded?

What type of fractions are the above called? Circle one.

☐ Unit fractions ☐ Non - unit fractions

Children on this sheet are given bars already equally split to support them. They also have a choice of vocabulary to choose from.

★★ Working Within

Complete the table.

Fraction	Bar	Words
$\frac{1}{2}$		
$\frac{1}{3}$		
$\frac{1}{4}$		

What fraction of each object is circled?

What fraction of each shape is shaded?

What type of fractions are the above called?

Children on this sheet will need to split their bars equally. They also have to remember the correct vocabulary.

★★★ Greater Depth

Complete the table.

Fraction	Bar	Words
$\frac{1}{2}$		
$\frac{1}{3}$		
$\frac{1}{4}$		one third

What fraction of each object is circled?

What fraction of each shape is shaded?

What type of fractions are the above called?

Children on this sheet have more missing parts to their table, along with complex shapes.

Reasoning & Problem Solving

True or False?

$\frac{1}{2}$ is represented.

Can you shade the same shape so that it represents $\frac{1}{3}$?

What has changed? What do you notice?

Esin is thinking of a number. One third of her number is 8.

What could Esin's number be?

Which will be greater, one half of her number or one third of her number?

Use cubes or a bar model to prove your answer.

???

True or False?

$\frac{1}{3}$ is represented.

Can you shade the same shape so that it represents $\frac{1}{4}$?

What has changed? What do you notice?

Esin is thinking of a number. One quarter of her number is 12.

Which will be greater, one half of her number or one third of her number?

Use cubes or a bar model to prove your answer.

???

True or False?

$\frac{1}{3}$ is represented.

Can you shade the same shape so that it represents $\frac{1}{4}$?

What has changed? What do you notice?

Esin is thinking of a number. One quarter of her number is the same as one third of 27.




Which will be greater, one half of her number or one third of her number?

Use cubes or a bar model to prove your answer.

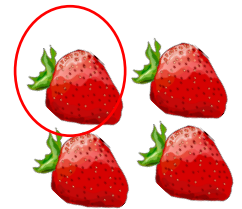
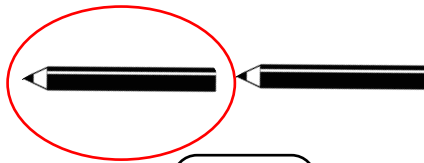
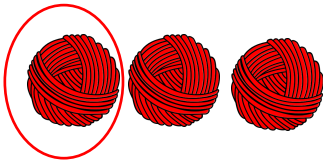
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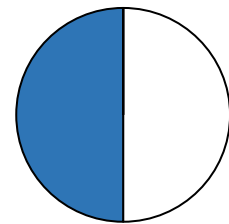
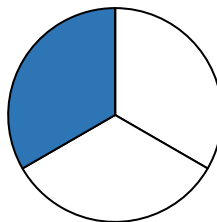
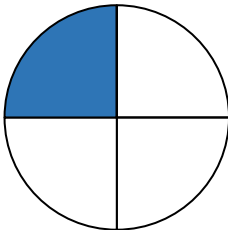
Complete the table.

Fraction	Bar	Words
$\frac{1}{2}$		
$\frac{1}{3}$		
$\frac{1}{4}$		

What fraction of each object is circled?



What fraction of each shape is shaded?



What type of fractions are the above called? Circle one.

Unit fractions

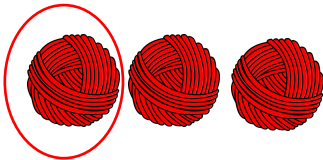
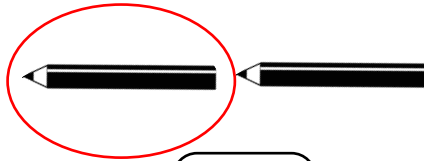
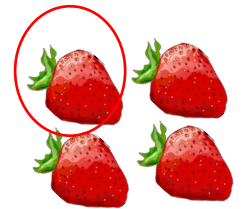
Non - unit fractions



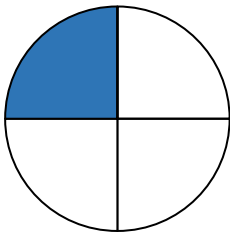
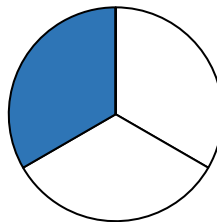
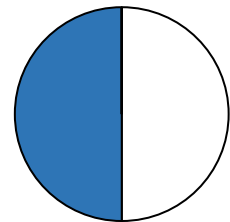
Complete the table.

Fraction	Bar	Words
$\frac{1}{2}$		one half
$\frac{1}{3}$		one third
$\frac{1}{4}$		one quarter

What fraction of each object is circled?

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

What fraction of each shape is shaded?

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

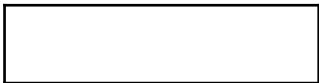
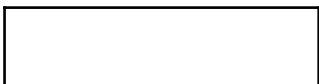
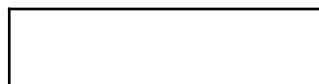
What type of fractions are the above called? Circle one.

Unit fractions

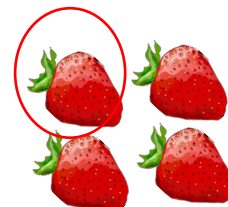
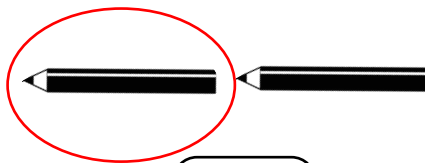
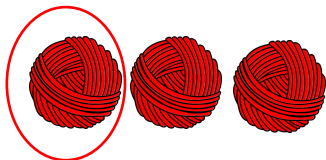
Non - unit fractions



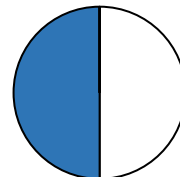
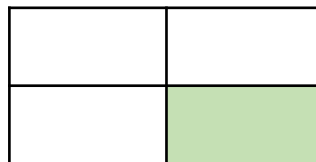
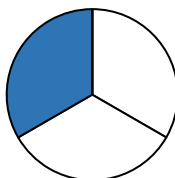
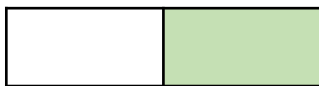
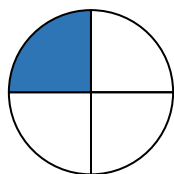
Complete the table.

Fraction	Bar	Words
$\frac{1}{2}$		
$\frac{1}{3}$		
$\frac{1}{4}$		

What fraction of each object is circled?



What fraction of each shape is shaded?



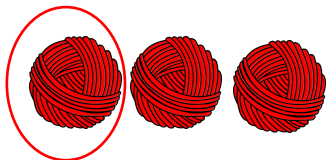
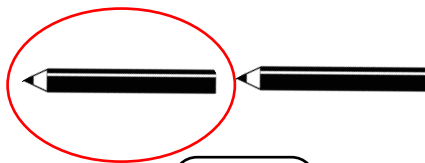
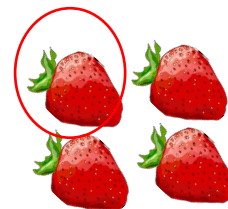
What type of fractions are the above called?



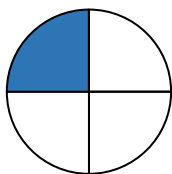
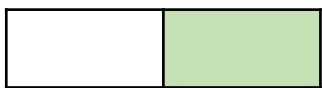
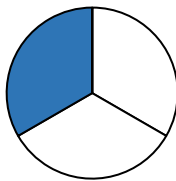
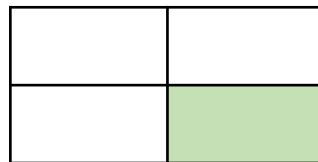
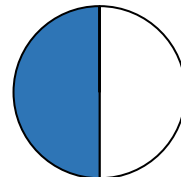
Complete the table.

Fraction	Bar	Words
$\frac{1}{2}$		one half
$\frac{1}{3}$		one third
$\frac{1}{4}$		one quarter

What fraction of each object is circled?


 $\frac{1}{3}$

 $\frac{1}{2}$

 $\frac{1}{4}$

What fraction of each shape is shaded?




 $\frac{1}{4}$

 $\frac{1}{2}$

 $\frac{1}{3}$

 $\frac{1}{4}$

 $\frac{1}{2}$

What type of fractions are the above called?

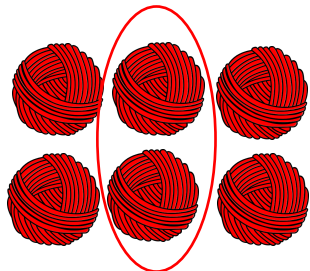
Unit fractions

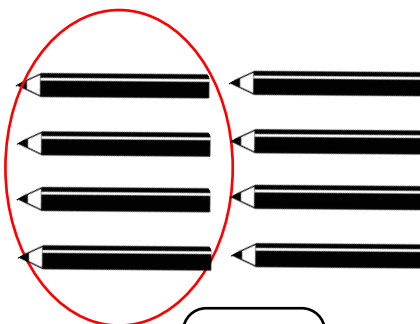


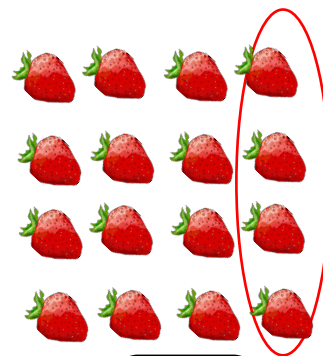
Complete the table.

Fraction	Bar	Words
		
		one third
$\frac{1}{4}$		

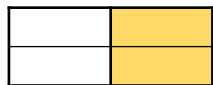
What fraction of each object is circled?

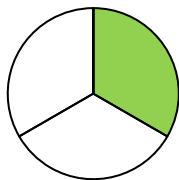


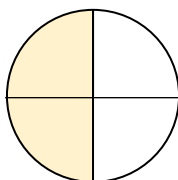


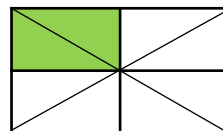


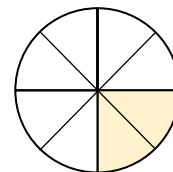
What fraction of each shape is shaded?
One half, one quarter or one third?











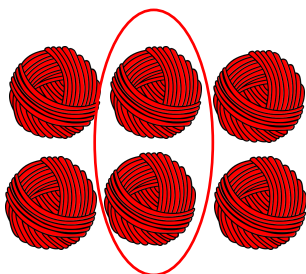
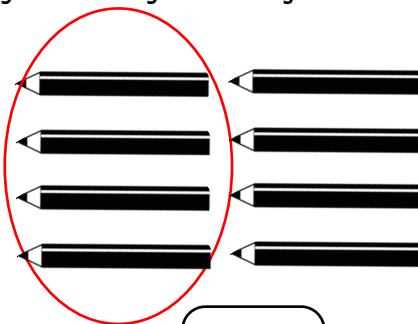
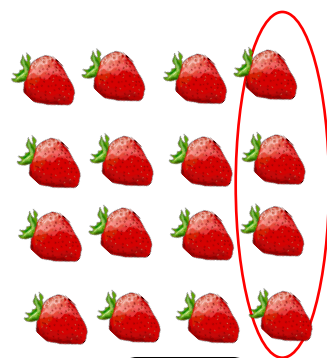
What type of fractions are the above called?



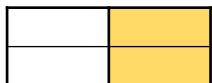
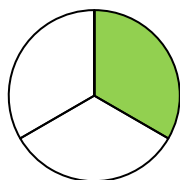
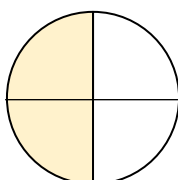
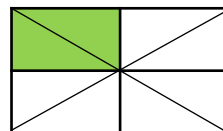
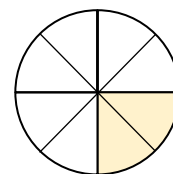
Complete the table.

Fraction	Bar	Words
$\frac{1}{2}$		one half
$\frac{1}{3}$		one third
$\frac{1}{4}$		one quarter

What fraction of each object is circled?


 $\frac{1}{3}$

 $\frac{1}{2}$

 $\frac{1}{4}$

What fraction of each shape is shaded?
One half, one quarter or one third?


 $\frac{1}{2}$

 $\frac{1}{3}$

 $\frac{1}{2}$

 $\frac{1}{4}$

 $\frac{1}{4}$

What type of fractions are the above called?

Unit fractions



True or False?

$\frac{1}{2}$ is represented.



Can you shade the same shape so that it represents $\frac{1}{3}$?

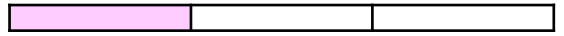


What has changed?
What do you notice?

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Esin is thinking of a number.

One third of her number is 8.



What could Esin's number be?

Which will be greater, one half of her number or one third of her number?

Use cubes or a bar model to prove your answer.

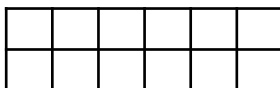


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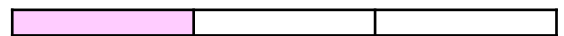


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Use cubes or a bar model to prove your answer.





True or False?

$\frac{1}{2}$ is represented.



True. There are 12 squares altogether and 6 are shaded.

Can you shade the same shape so that it represents $\frac{1}{3}$?

One third of 12 is 4. Any 4 squares shaded. E.g.



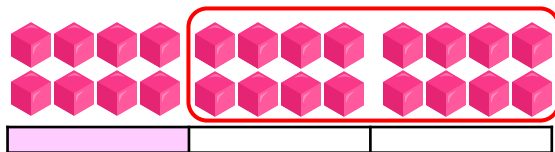
The number of shaded squares has changed. To represent $\frac{1}{2}$ we need more squares of the same whole, so children may conclude what fraction is greater.

What has changed?

What do you notice?

Esin is thinking of a number.

One third of her number is 8.



24.

One half is 12, so one half of the number will be greater.

What could Esin's number be?

Which will be greater, one half of her number or one third of her number?

Use cubes or a bar model to prove your answer.



True or False?

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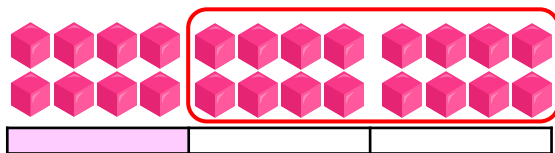
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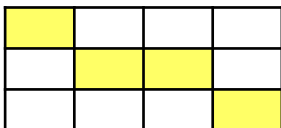
Use cubes or a bar model to prove your answer.



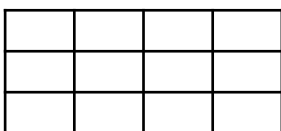


True or False?

$\frac{1}{3}$ is represented.



Can you shade the same shape so that it represents $\frac{1}{4}$?



What has changed?
What do you notice?

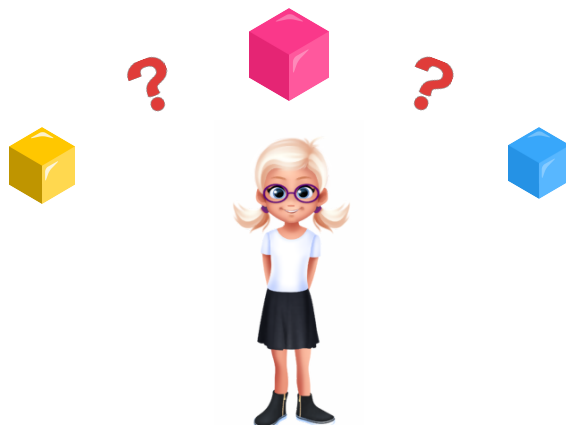
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Esin is thinking of a number.

One quarter of her number is 12.

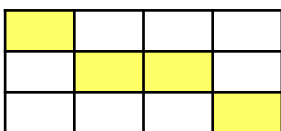
Which will be greater, one half of her number or one third of her number?

Use cubes or a bar model to prove your answer.

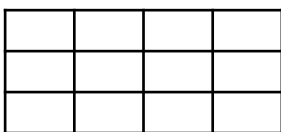


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What has changed?
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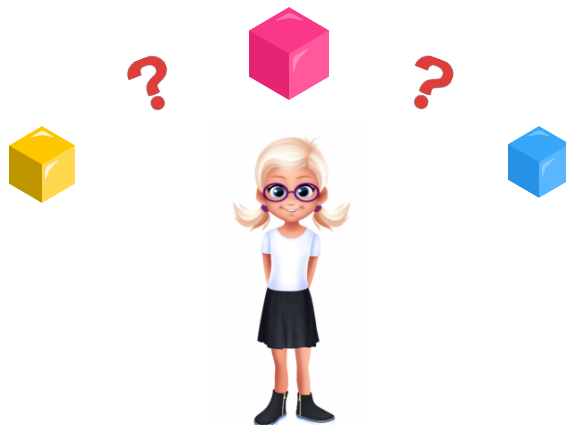
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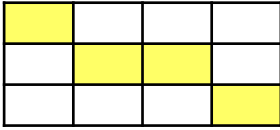
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True or False?

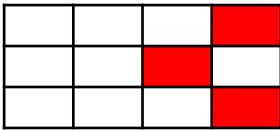
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True. There are 12 squares altogether and 4 are shaded.

Can you shade the same shape so that it represents $\frac{1}{4}$?

One quarter of 12 is 3. Any 3 squares shaded. E.g.



The number of shaded squares has changed. To represent $\frac{1}{3}$ we need more squares of the same whole, so children may conclude what fraction is greater.

What has changed?

What do you notice?

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Which will be greater, one half of her number or one third of her number?

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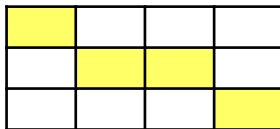
48.

One half is 24 and one third is 16, so one half of the number will be greater.



True or False?

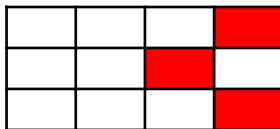
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48.

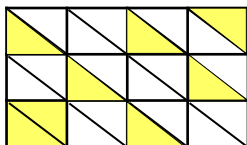
One half is 24 and one third is 16, so one half of the number will be greater.



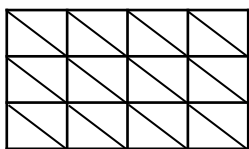


True or False?

$\frac{1}{3}$ is represented.



Can you shade the same shape so that it represents $\frac{1}{4}$?



What has changed?
What do you notice?

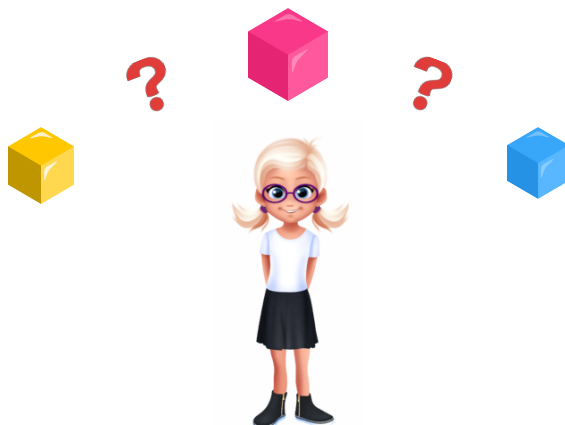
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Esin is thinking of a number.

One quarter of her number is the same as one third of 27.

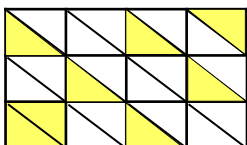
Which will be greater, one half of her number or one third of her number?

Use cubes or a bar model to prove your answer.

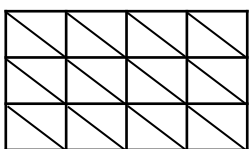


True or False?

$\frac{1}{3}$ is represented.



Can you shade the same shape so that it represents $\frac{1}{4}$?



What has changed?
What do you notice?

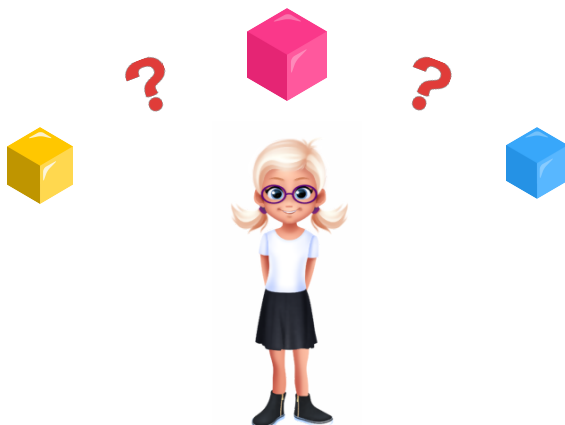
masterthecurriculum.co.uk

Esin is thinking of a number.

One quarter of her number is the same as one third of 27.

Which will be greater, one half of her number or one third of her number?

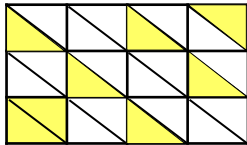
Use cubes or a bar model to prove your answer.





True or False?

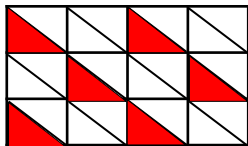
$\frac{1}{3}$ is represented.



True. There are 24 triangles altogether and 8 are shaded.

Can you shade the same shape so that it represents $\frac{1}{4}$?

One quarter of 24 is 6. Any 6 triangles shaded. E.g.



The number of shaded triangles has changed. To represent $\frac{1}{3}$ we need more squares of the same whole, so children may conclude what fraction is greater.

What has changed?

What do you notice?

Esin is thinking of a number.

One quarter of her number is the same as one third of 27.

Which will be greater, one half of her number or one third of her number?

Use cubes or a bar model to prove your answer.

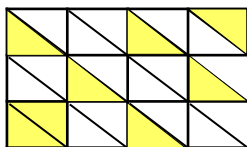
36.

One half is 18 and one third is 12, so one half of the number will be greater.



True or False?

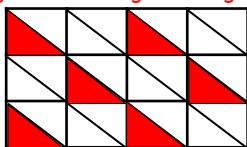
$\frac{1}{3}$ is represented.



True. There are 24 triangles altogether and 8 are shaded.

Can you shade the same shape so that it represents $\frac{1}{4}$?

One quarter of 24 is 6. Any 6 triangles shaded. E.g.



The number of shaded triangles has changed. To represent $\frac{1}{3}$ we need more squares of the same whole, so children may conclude what fraction is greater.

What has changed?

What do you notice?

Esin is thinking of a number.

One quarter of her number is the same as one third of 27.

Which will be greater, one half of her number or one third of her number?

Use cubes or a bar model to prove your answer.

36.

One half is 18 and one third is 12, so one half of the number will be greater.

