Fractions

Master The Curriculum

1

Fluency Teaching Slides

Find a Half (1)

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Fluency Teaching Slides

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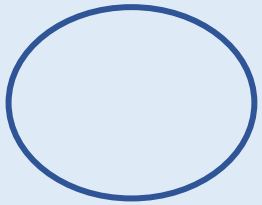
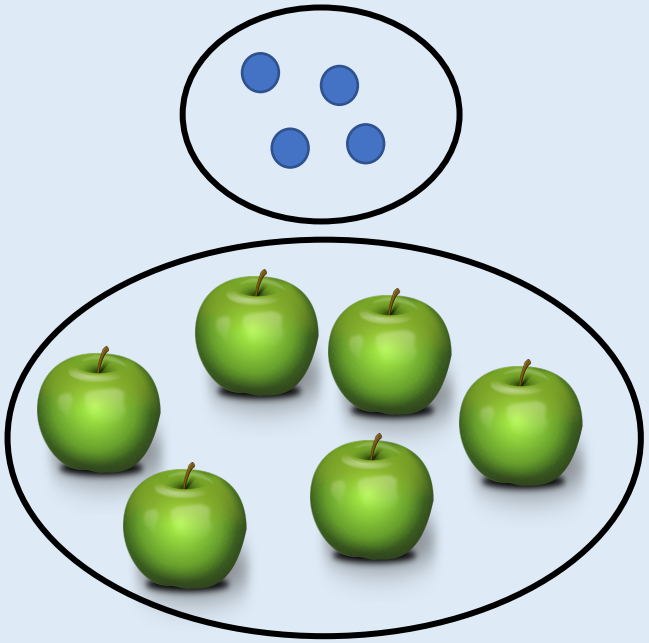
Activity 1 Find a Half (1)

To find a half – you need to know what a whole is.

one object



one quantity (amount)

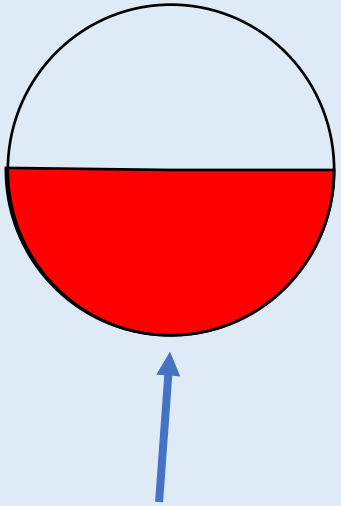


What is in your classroom that is a whole?

Activity 1 Find a Half (1)

What is a half?

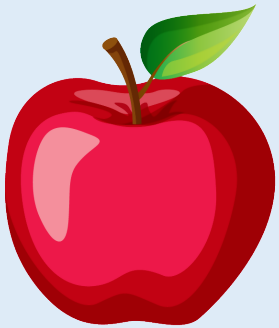
One of two equal parts.
Equal can mean 'the same'.



A half of this circle is red.
It is one of two equal parts.
Both parts are equal because they are the same size.

Activity 1 Find a Half (1)

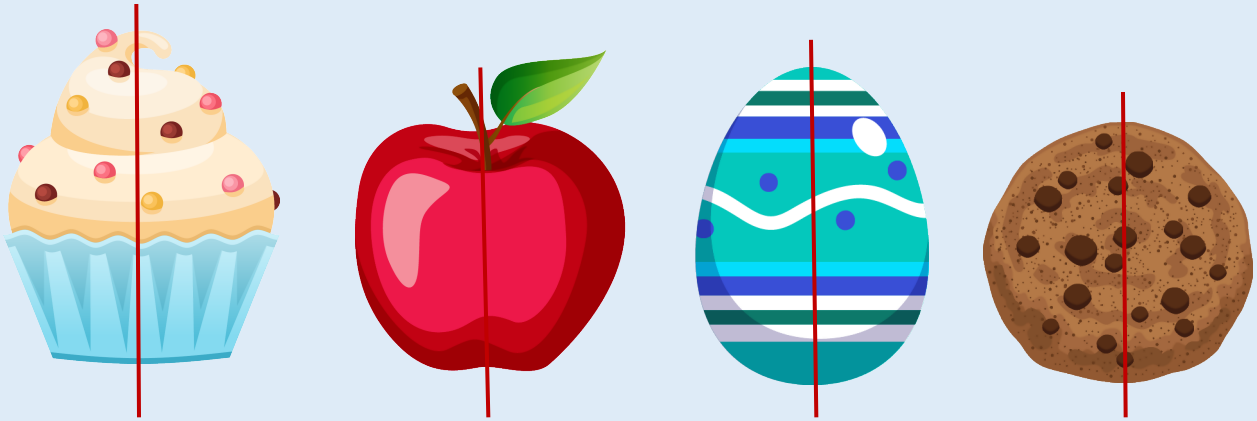
Show the children real life objects and how they can be cut in half. How can we cut these objects in half?

How can you show a half of something?

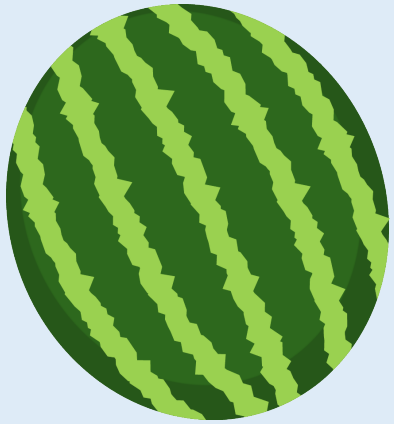
Activity 1 Find a Half (1)

Show the children real life objects and how they can be cut in half. How can we cut these objects in half?



Activity 1 Find a Half (1)

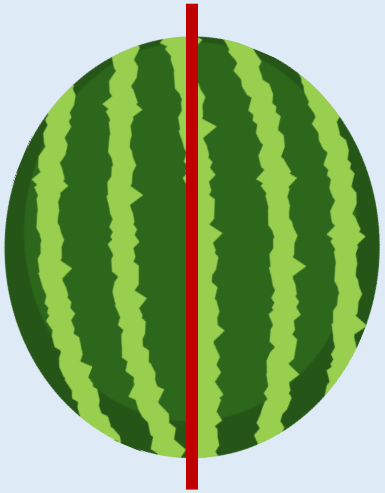
Show the children real life objects and how they can be cut in half. How can we cut these objects in half?



How many parts have I split my object into?

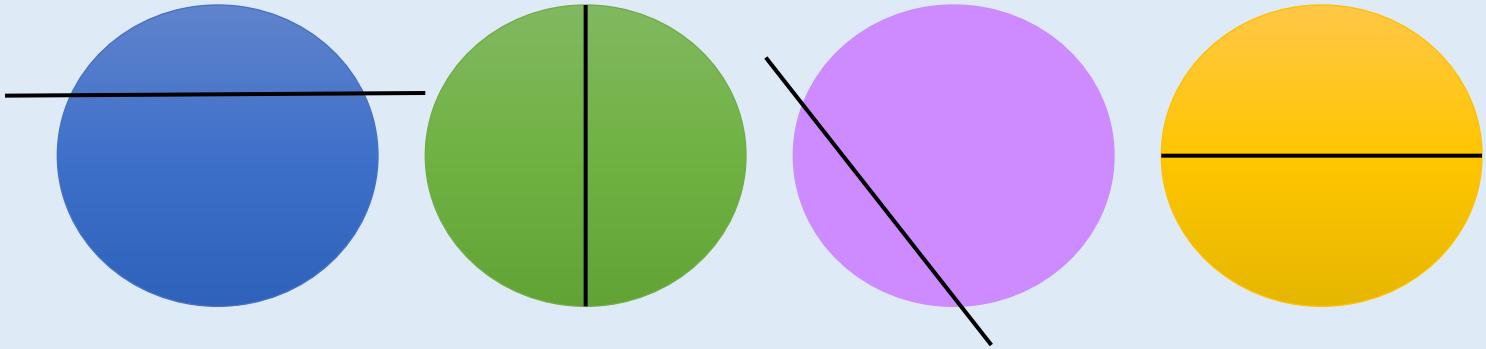
Activity 1 Find a Half (1)

Show the children real life objects and how they can be cut in half. How can we cut these objects in half?



Activity 2 Find a Half (1)

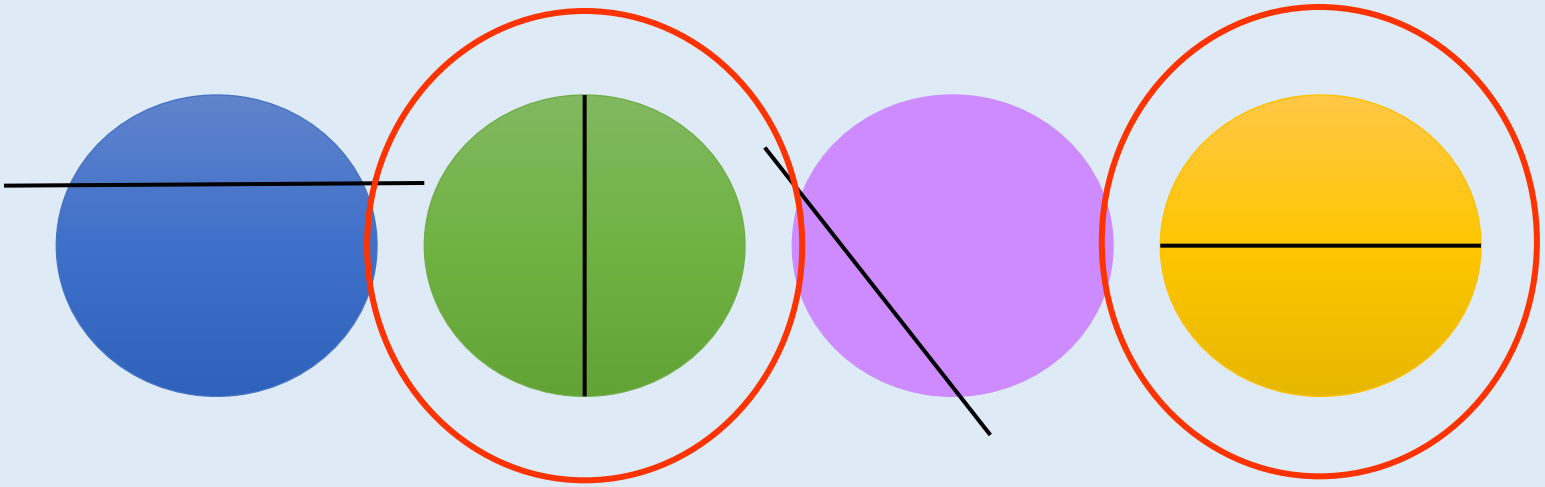
Which circles have been split into equal halves?



How do you know if an object or shape has not been split in half?

Activity 2 Find a Half (1)

Which circles have been split into equal halves?



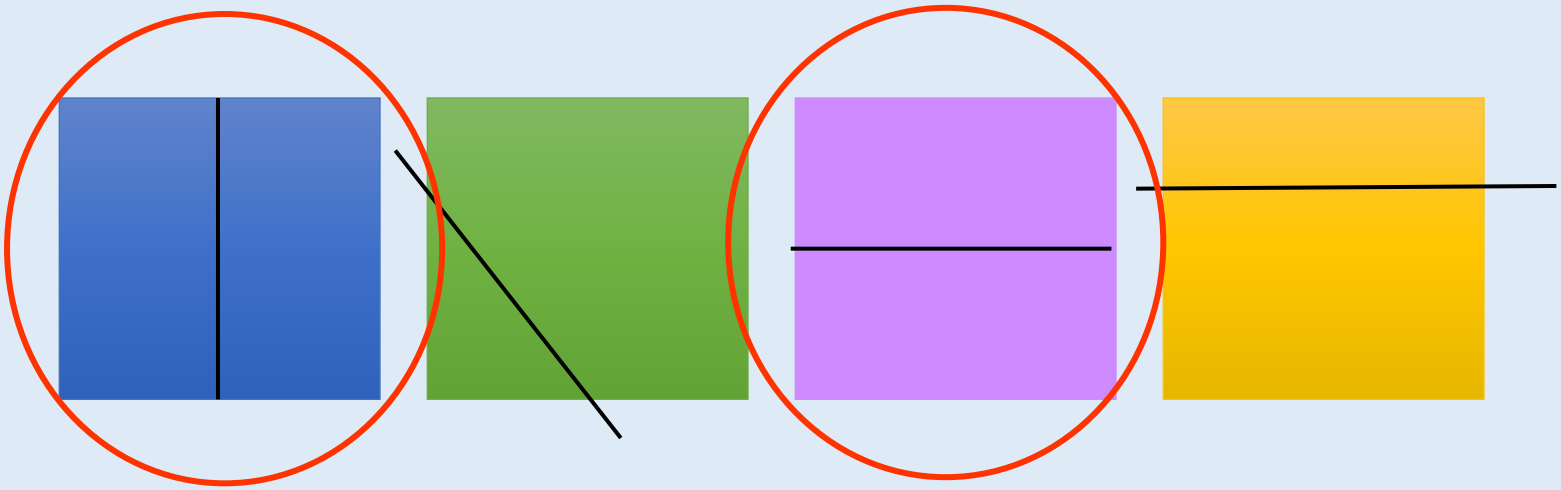
Activity 2 Find a Half (1)

Which circles have been split into equal halves?

Can we count them?

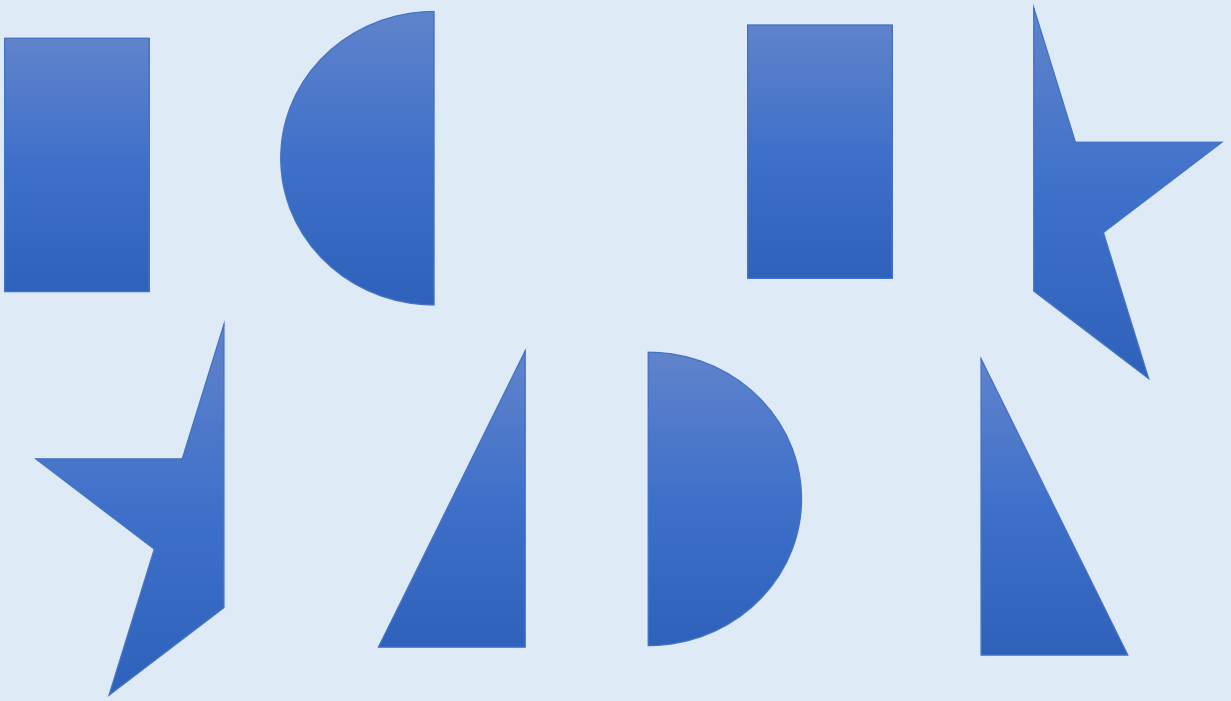
Activity 2 Find a Half (1)

Which circles have been split into equal halves?



Activity 3 Find a Half (1)

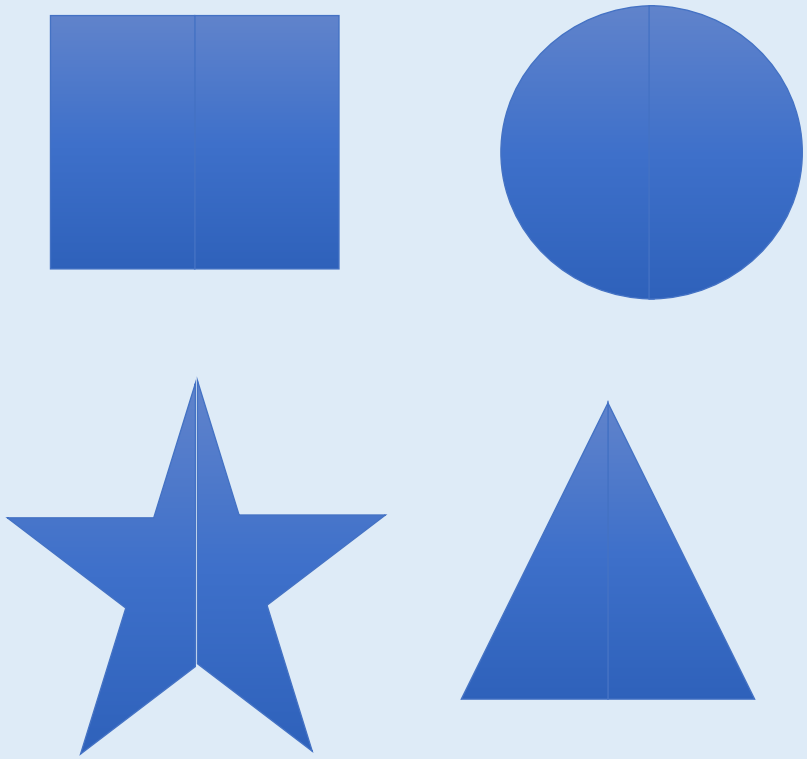
Match the halves to make 5 complete shapes.



How many halves make a whole?

Activity 3 Find a Half (1)

Match the halves to make 5 complete shapes.



Activity 3

Find a Half (1)

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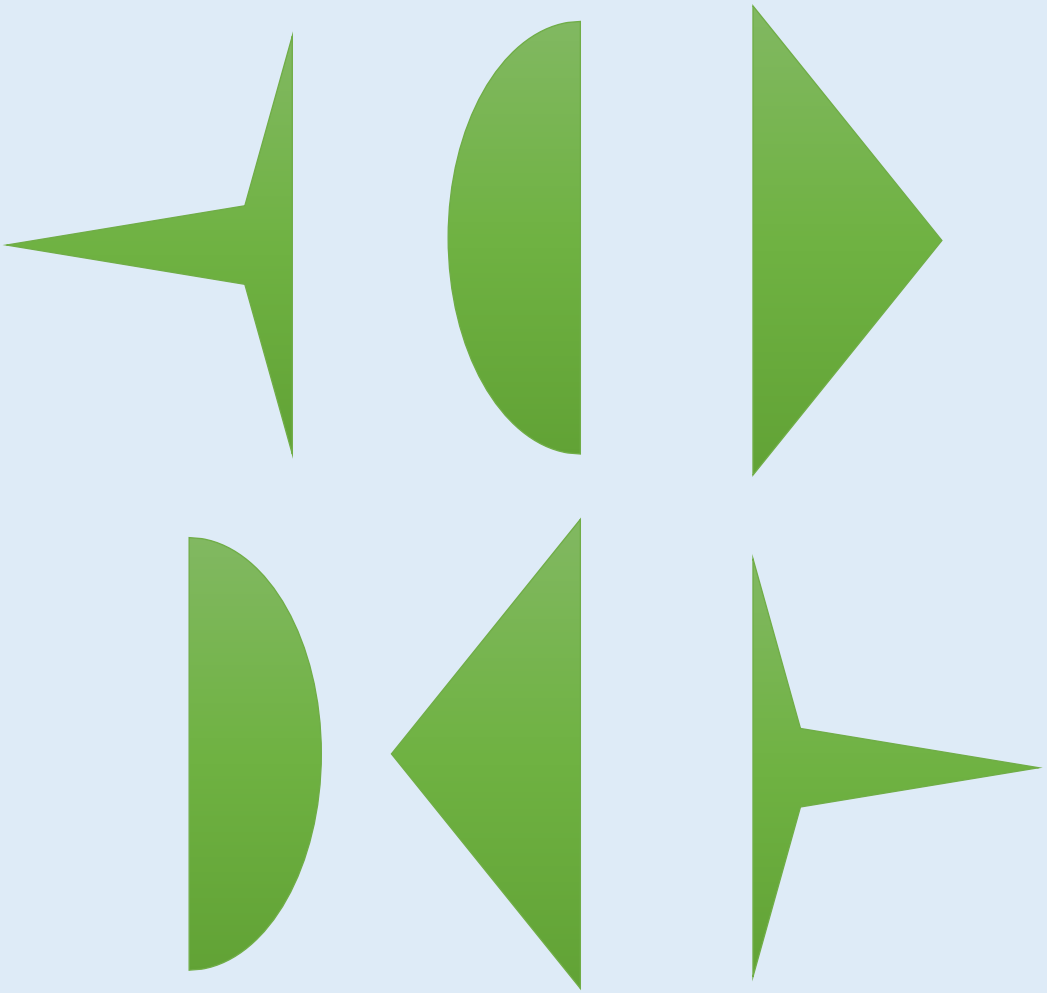

Activity 3 Find a Half (1)

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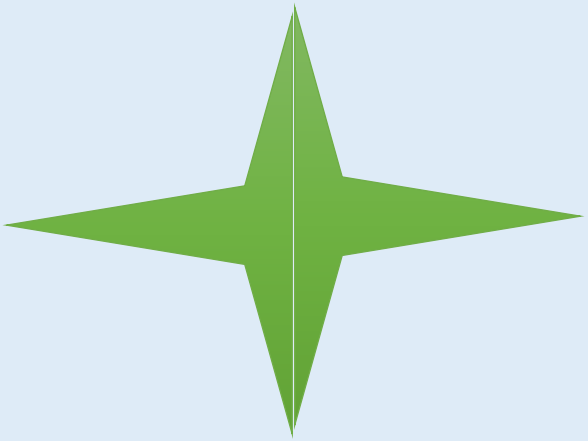
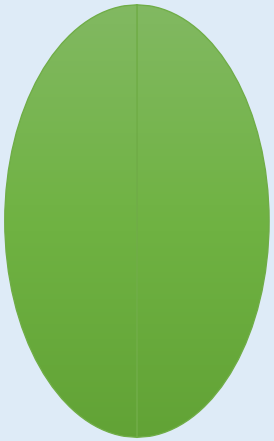
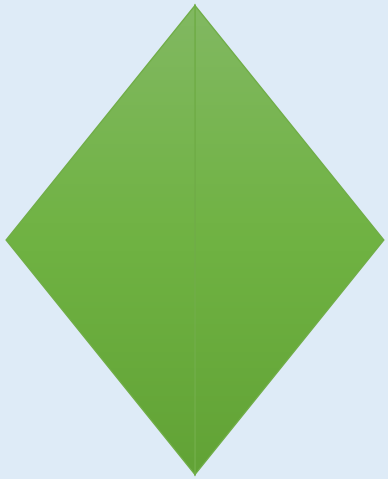
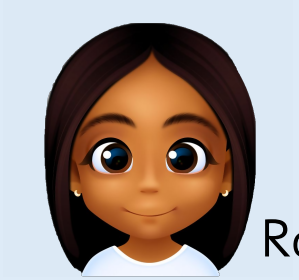




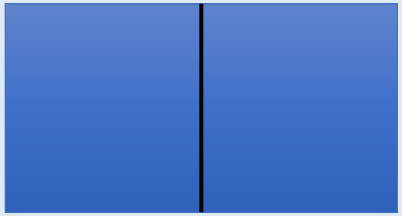


Reasoning - 1 Find a Half (1)

Rosie and Zach are both attempting to split a rectangle in half. Find Jack's three examples.

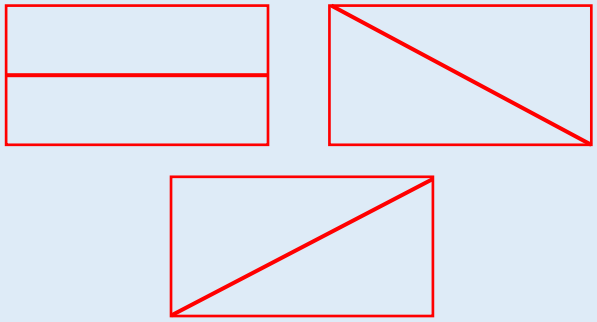


Rosie



I can find three more ways.

Possible answers:

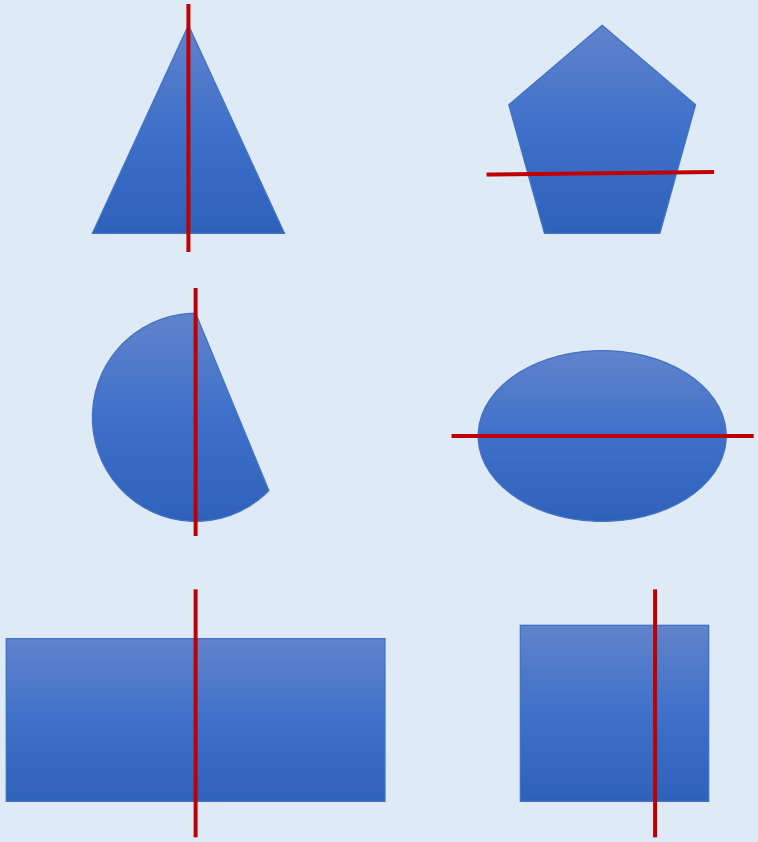


Zach

Reasoning - 2 Find a Half (1)

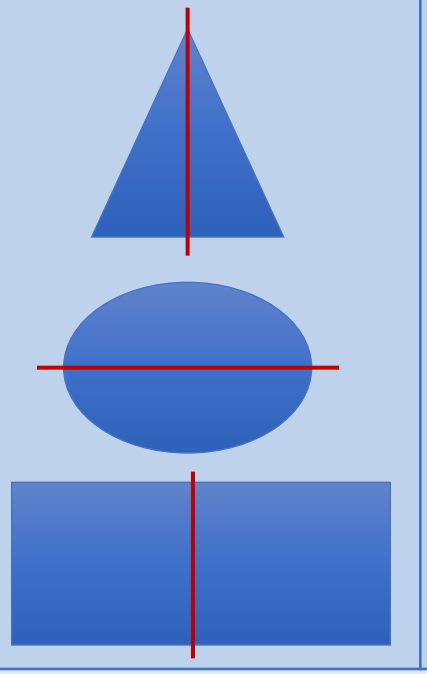
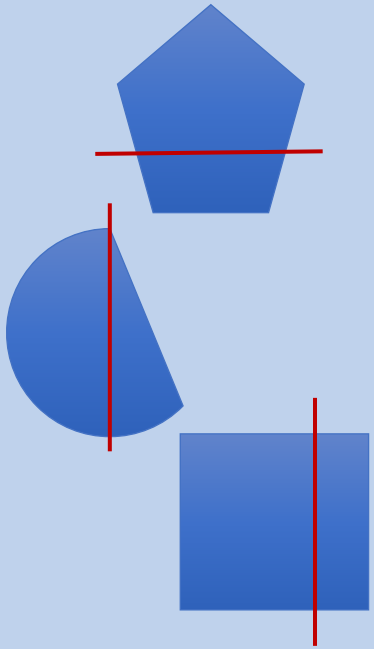
Sort the shapes into the table.

Shapes that are split in half	Shapes that are not split in half



Reasoning - 2 Find a Half (1)

Sort the shapes into the table.

Shapes that are split in half	Shapes that are not split in half
	

There are a number of different answers for other shapes children could add to the table.

Discussion

Find a Half (1)

How many parts have I split my object into?
How can you show a half of something?

How do you know if a shape is split into halves?
How many halves make a whole?

Can we count them?
How do you know if an object or shape has not been split in half?

Is there more than one way to show half of a shape or object?
Is this the same for all shapes?

Find a Half (2)

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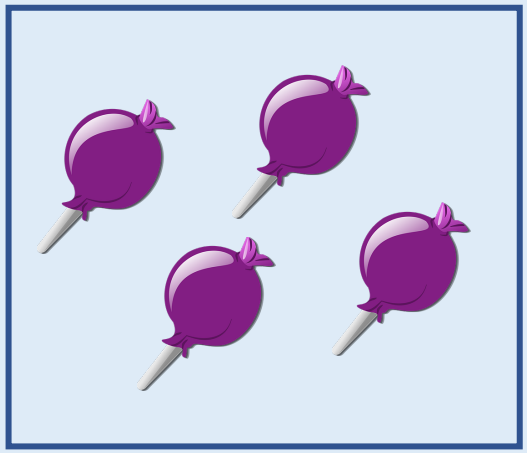
Activity 1 Find a Half (2)

What is a quantity?

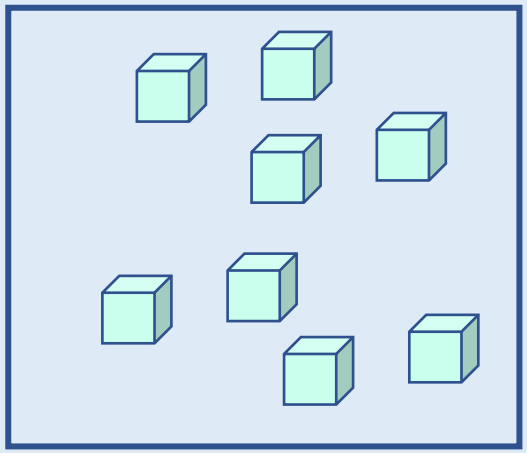
We can find half of a quantity.
Quantity means 'amount' or 'how many there are'.

Look at the quantities of each objects below.



Quantity:

Quantity:



Quantity:

Activity 1 Find a Half (2)

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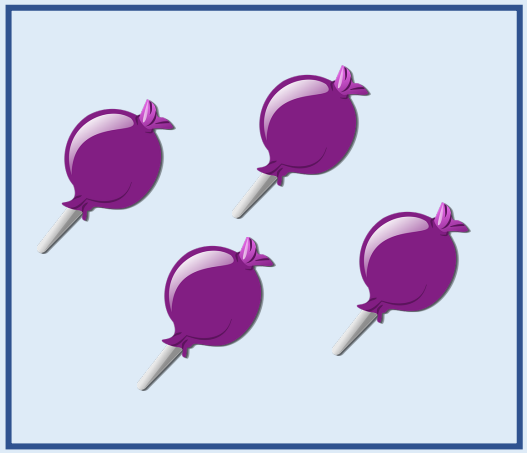
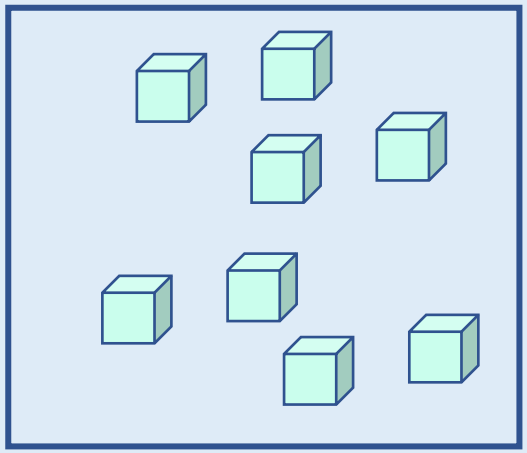


Quantity: 4

Quantity: 2

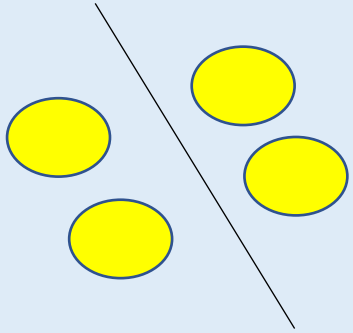


Quantity: 8

Activity 1 Find a Half (2)

Remember! A half is 'one of two equal parts.'

Equal can mean 'the same'.

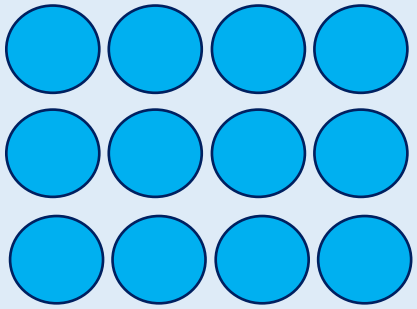


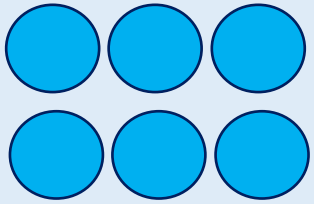
I have 4 circles.
I have split them in half.

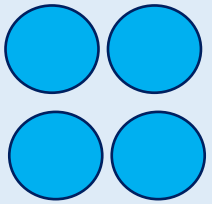
I know it is a half because there are equal amounts on both sides.

Activity 1 Find a Half (2)

Find half of each amount.



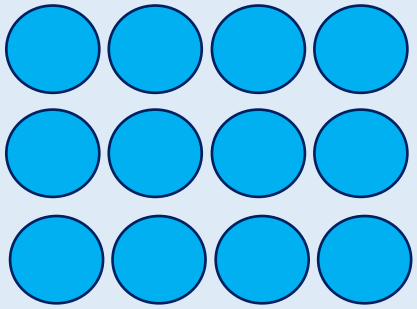




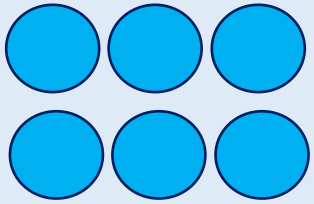
How can we find half of an amount?

Activity 1 Find a Half (2)

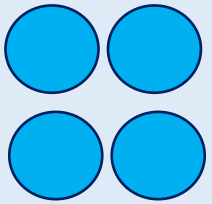
Find half of each amount.



Half of 12 is 6.



Half of 6 is 3.



Half of 4 is 2.

How can we find half of an amount?

Activity 1

Find a Half (2)

Find half of each amount.

Activity 1 Find a Half (2)

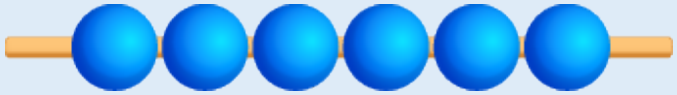
Find half of each amount.

Half of 20p is 10p.

Half of 40p is 20p.

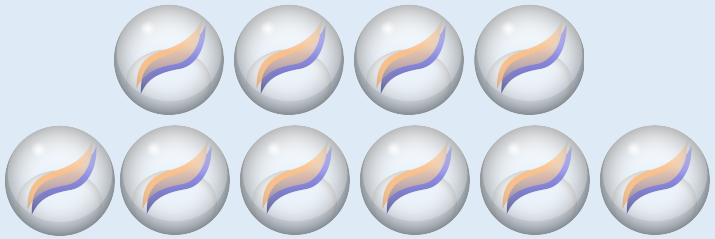
Activity 2 Find a Half (2)

Find half of the amounts and complete the stem sentences.



There are ____ beads.

Half of ____ is ____.



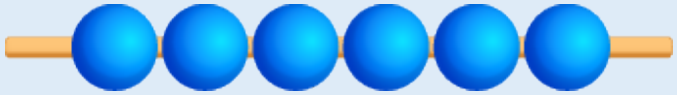
There are ____ marbles.

Half of ____ is ____.

How many groups do we need to share our beads between?

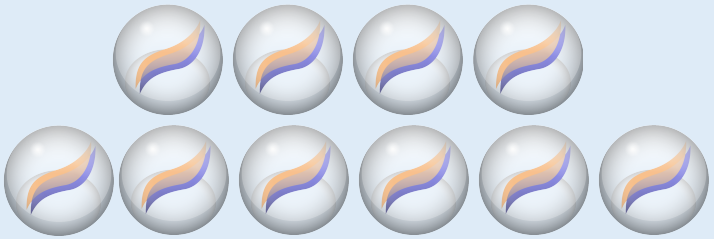
Activity 2 Find a Half (2)

Find half of the amounts and complete the stem sentences.



There are 6 beads.

Half of 6 is 3.



There are 10 marbles.

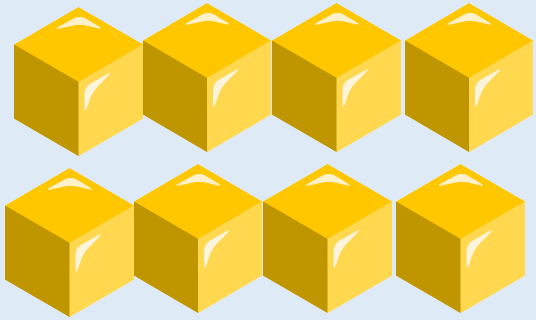
Half of 10 is 5.

Activity 2 Find a Half (2)

Find half of the amounts and complete the stem sentences.

There are ____ sweets.

Half of ____ is ____.



There are ____ cubes.

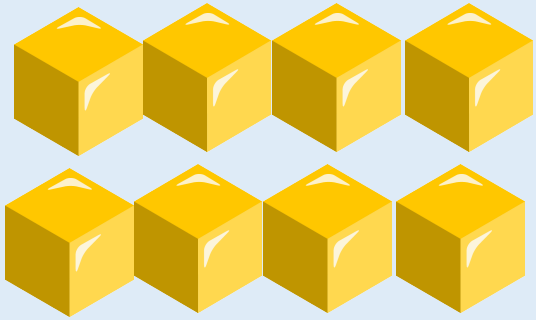
Half of ____ is ____.

Activity 2 Find a Half (2)

Find half of the amounts and complete the stem sentences.

There are 4 sweets.

Half of 4 is 2.

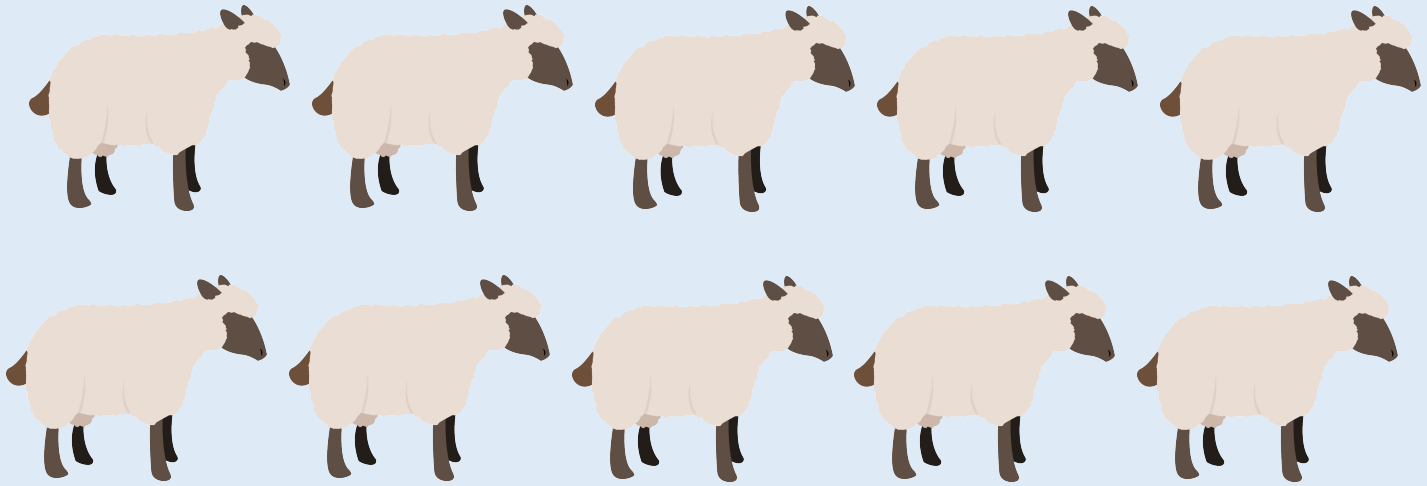


There are 8 cubes.

Half of 8 is 4.

Activity 3 Find a Half (2)

Find half of the sheep.



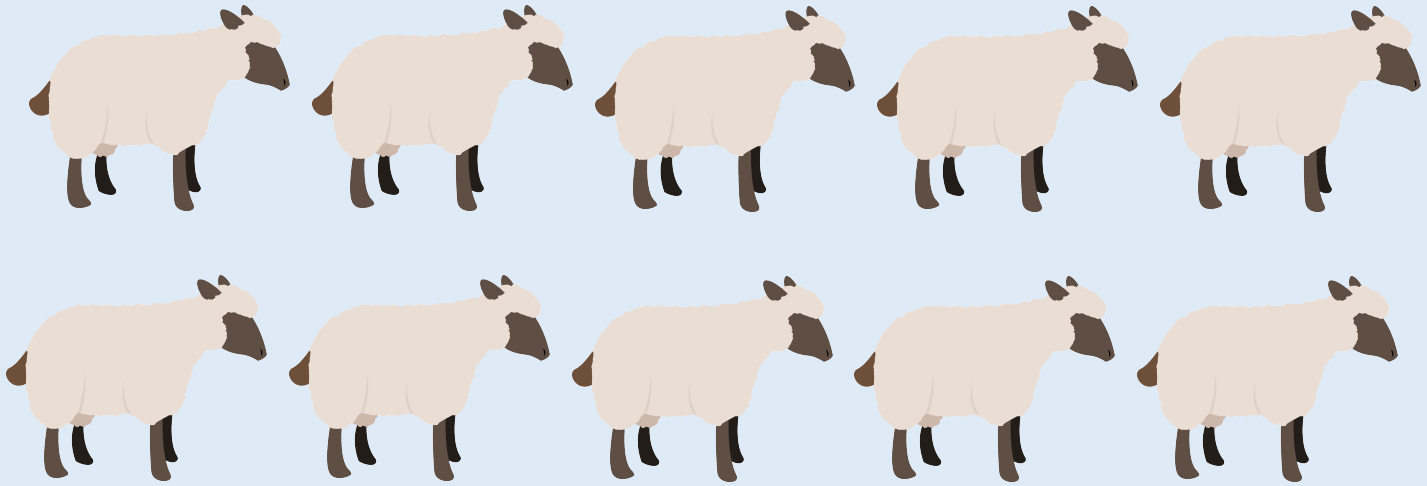
There are ____ sheep.

Half of ____ is ____.

How can you check that you have found half?

Activity 3 Find a Half (2)

Find half of the sheep.



There are 10 sheep.

Half of 10 is 5.

Activity 3 Find a Half (2)

Find half of the umbrellas.

There are ____ umbrellas.

Half of ____ is ____.

Activity 3 Find a Half (2)

Find half of the umbrellas.

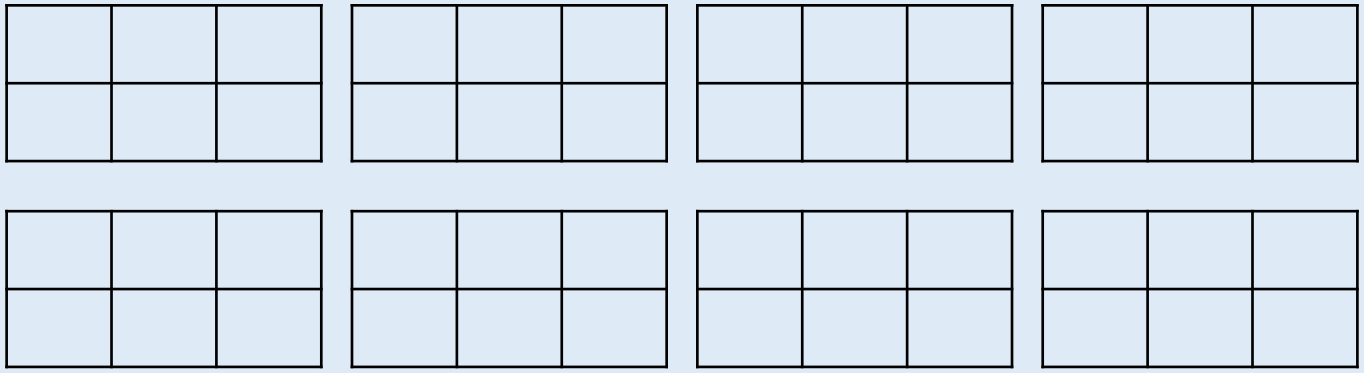
There are 8 umbrellas.

Half of 8 is 4.

Reasoning - 1

Find a Half (2)

How many different ways can you shade one half of the shapes?



Reasoning - 1

Find a Half (2)

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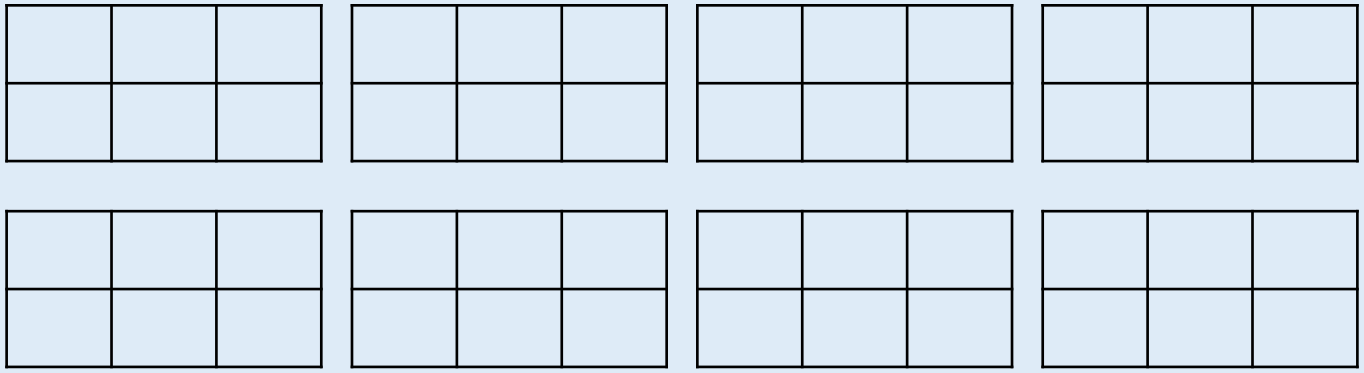

Any combination that has three whole squares shaded out of the 6

Reasoning - 2 Find a Half (2)

Do you agree with Tia? Explain your answer.

It is hard to find half of an odd number.

Reasoning - 2 Find a Half (2)

Do you agree with Tia? Explain your answer.

It is hard to find half of an odd number.

I agree with Tia because an odd number cannot be shared equally between 2. It would not give a whole number answer.

Discussion

Find a Half (2)

How can we find half of an amount?

How many groups do we need to share our beads between?

How can you check that you have found half?

How many equal parts should you have when you have split the objects in half?

Find a Quarter (1)

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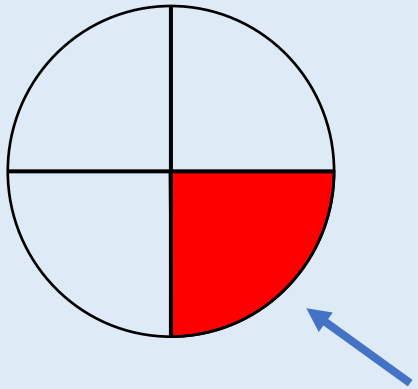
Activity 1 Find a Quarter (1)

What is a quarter?

One of four equal parts.

Equal can mean ‘the same’.



A quarter of this circle is red.
It is one of four equal parts.
All parts are equal because they are the same size.

Activity 1 Find a Quarter (1)

Take two square pieces of paper, two circular pieces of paper and two rectangular pieces of paper.

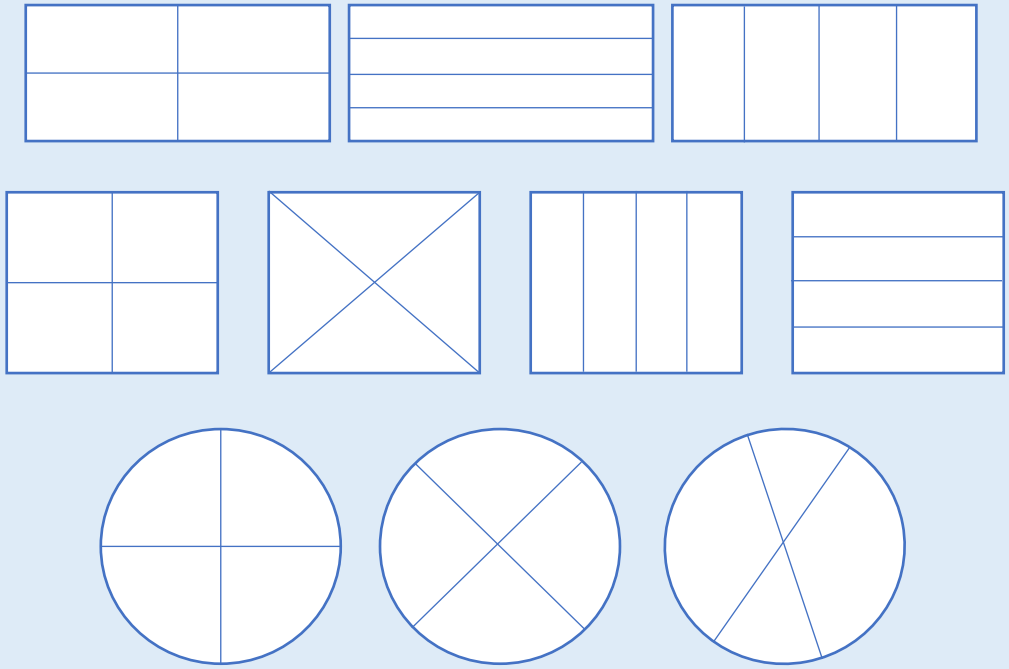
Model folding one of each into four equal parts and the other into four non-equal parts.

- Which shapes show equal parts? Which do not?
- How many equal parts can we see?
- Can we fold any of the shapes in a different way and still

Count the equal parts and then model counting them in quarters.

Activity 2 Find a Quarter (1)

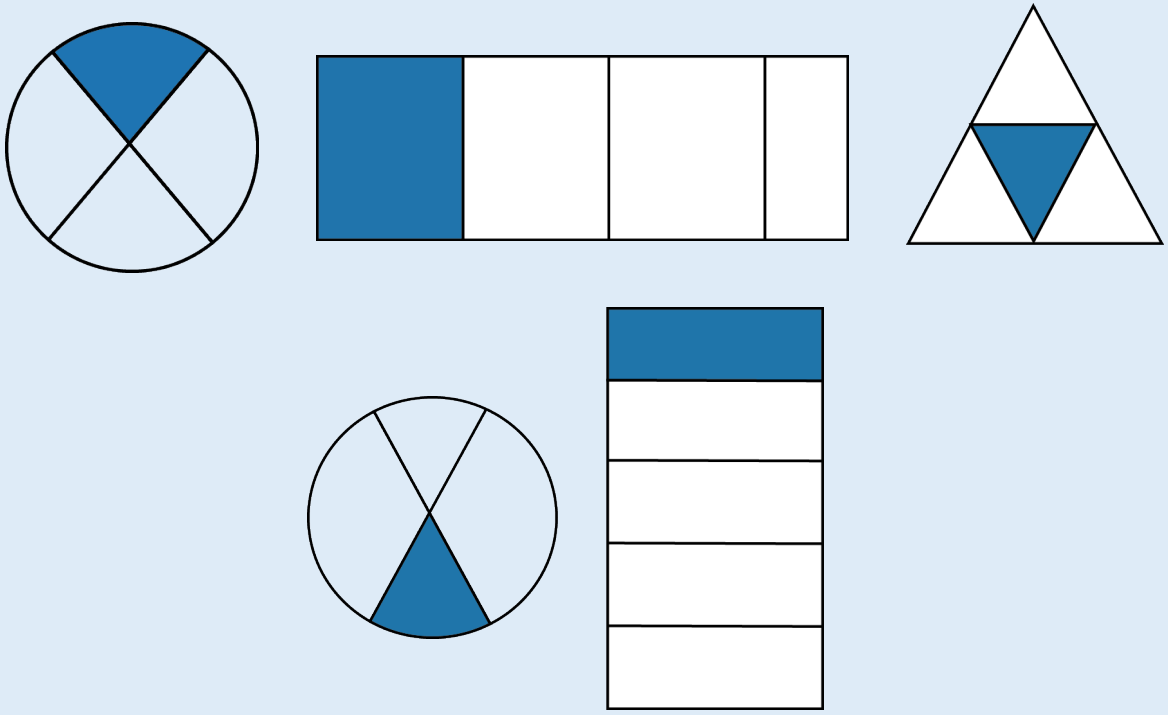
Colour a quarter of each shape.
Can you colour it in different ways?



Can we make a quarter in a different way?

Activity 3 Find a Quarter (1)

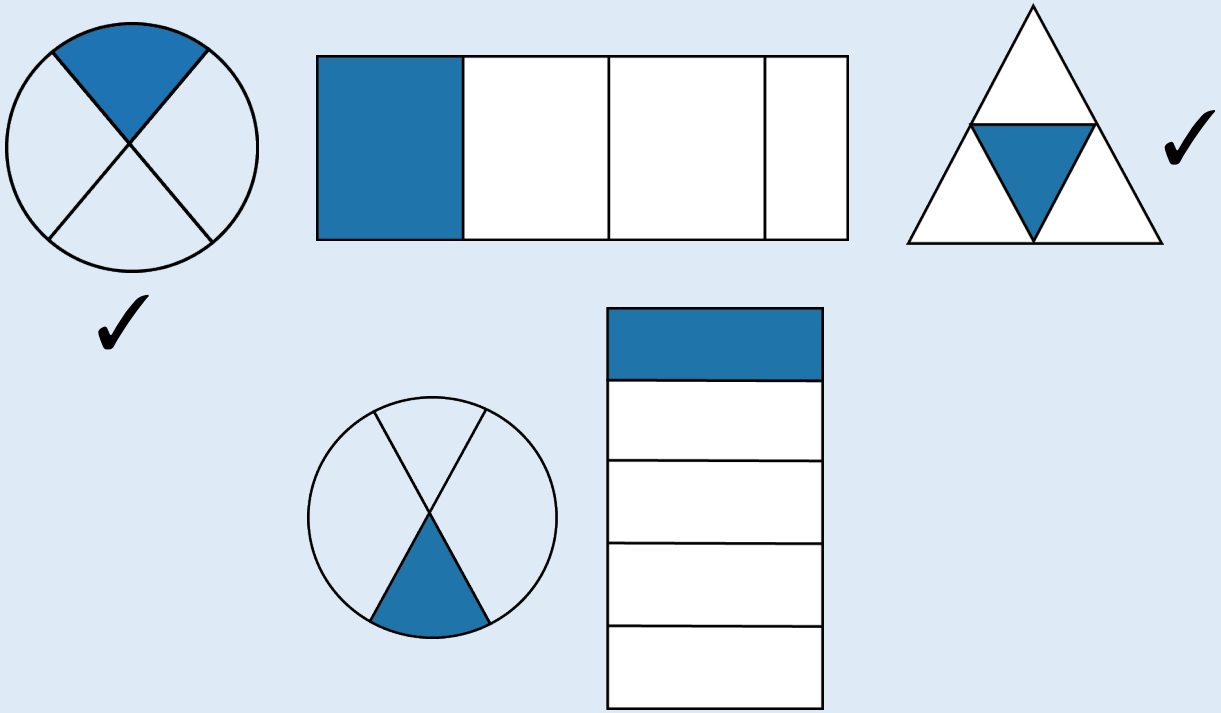
Tick the shapes that show quarters.



Which shapes show quarters?

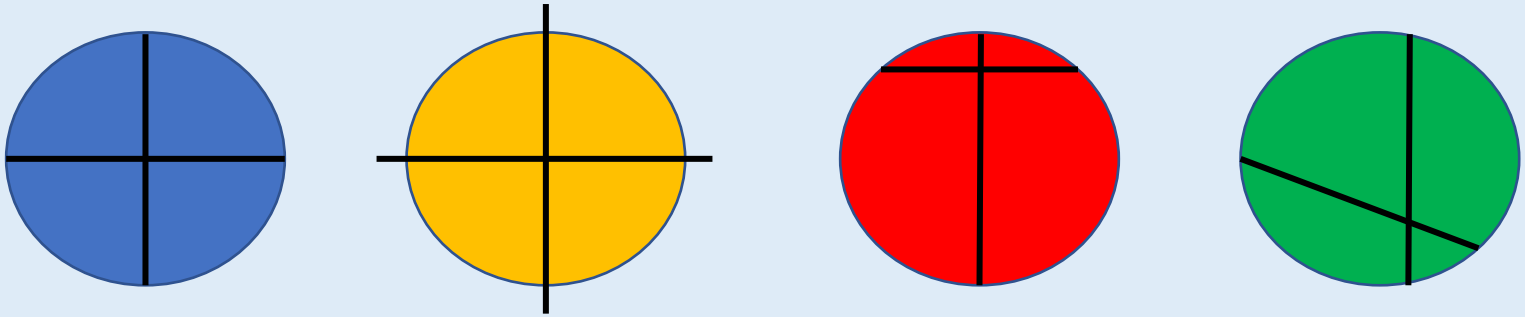
Activity 3 Find a Quarter (1)

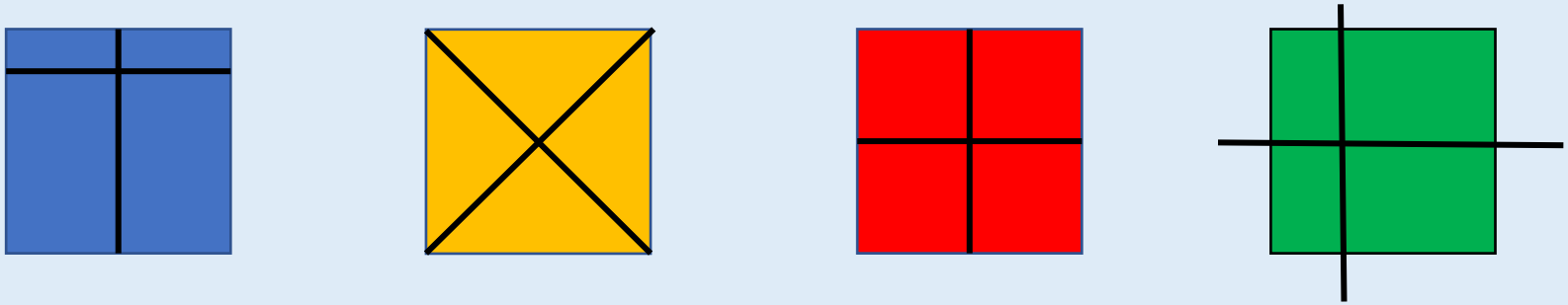
Tick the shapes that show quarters.



Activity 4 Find a Quarter (1)

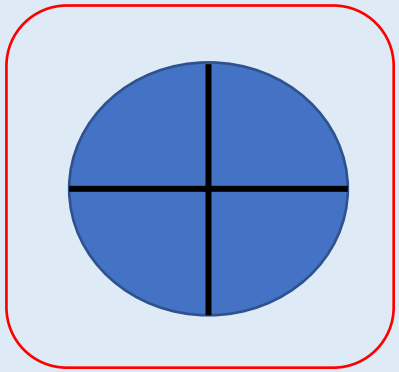
Which shapes have been split into quarters?

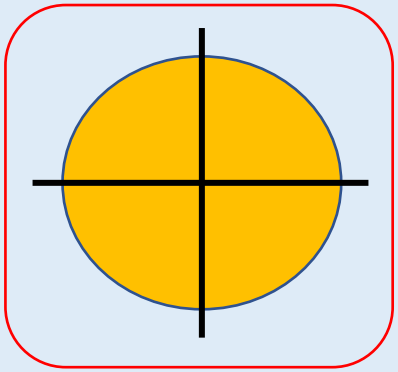


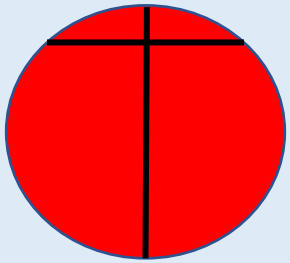


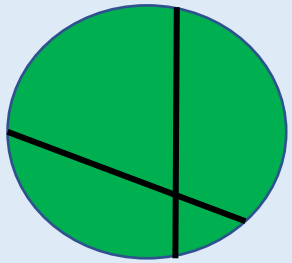
Activity 4 Find a Quarter (1)

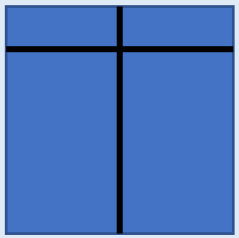
Which shapes have been split into quarters?

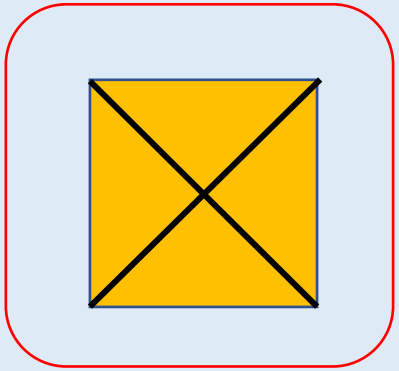


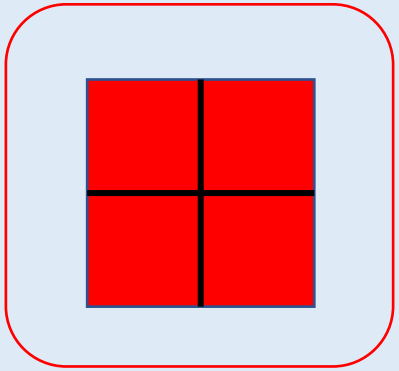


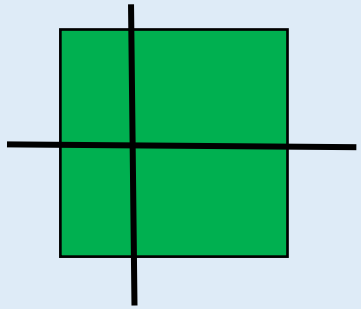








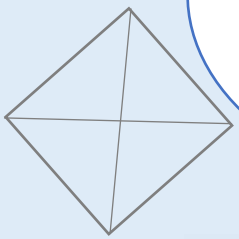




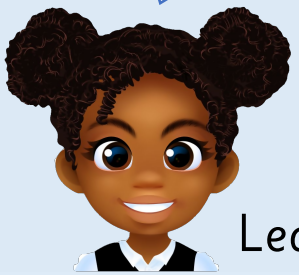
Reasoning - 1

Find a Quarter (1)

Malachi and Leanna are talking about quarters.
Are they correct? Explain your answer.

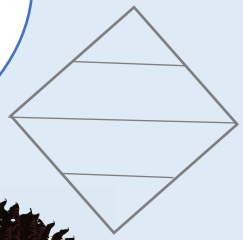


My shape shows quarters because it has four equal parts.



Leanna

My shape shows quarters because it has four parts.



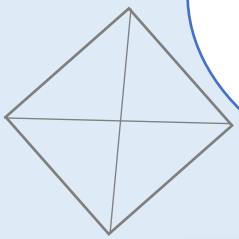
Malachi

Leanna is correct because quarters must be four equal parts. Malachi has split his square into four unequal parts so they are not quarters.

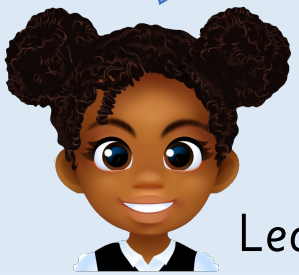
Reasoning - 1

Find a Quarter (1)

Malachi and Leanna are talking about quarters.
Are they correct? Explain your answer.

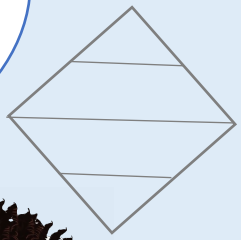


My shape shows quarters because it has four equal parts.



Leanna

My shape shows quarters because it has four parts.



Malachi

Reasoning - 2 Find a Quarter (1)

Use the squares to show:

- Less than a quarter shaded.
- Exactly a quarter shaded.
- More than a quarter shaded.

Reasoning - 2 Find a Quarter (1)

Use the squares to show:

- Less than a quarter shaded.
- Exactly a quarter shaded.
- More than a quarter shaded.

There are multiple solutions for each one.

Discussion

Find a Quarter (1)

How many parts does my whole have?

Are my parts equal or not equal?

How many equal parts can we see/count?

Can we make a quarter in a different way?

Which shapes show equal parts?

Which shapes show four equal parts?
Which shapes show quarters?

Find a Quarter (2)

1

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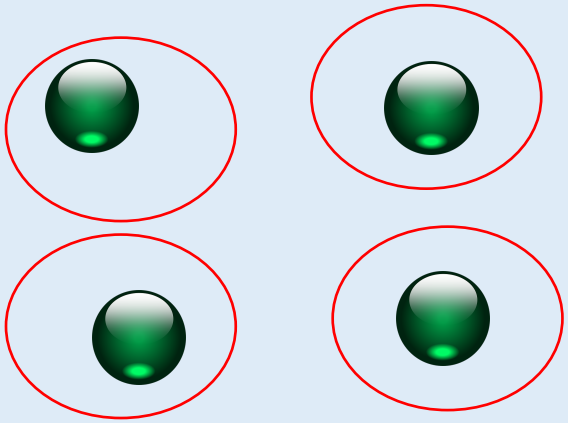
Activity 1 Find a Quarter (2)

A quarter of a quantity or amount

Remember! A quarter is 'one of four equal parts.'

Equal can mean 'the same'.



I have 4 marbles.
I have shared them into 4 equal groups.
I have split them into quarters.

There is 1 marble in each group.

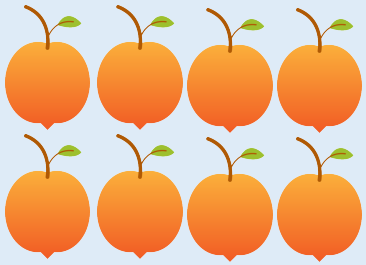
Activity 1 Find a Quarter (2)

Share each quantity into four equal groups.

There are ___ cakes.

There is ___ cake in each quarter.

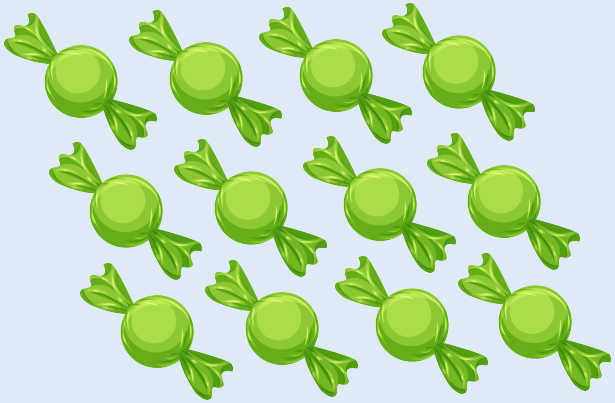
A quarter of ___ is ___



There are ___ peaches.

There are ___ peaches in each quarter.

A quarter of ___ is ___



There are ___ sweets.

There are ___ sweets in each quarter.

A quarter of ___ is ___.

? How many sweets do I have?

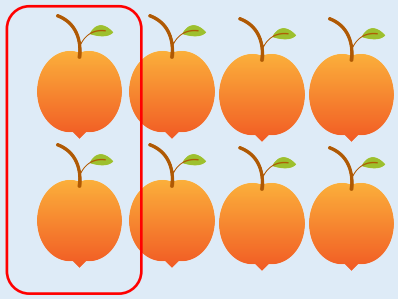
Activity 1 Find a Quarter (2)

Share each quantity into four equal groups.

There are 4 cakes.

There is 1 cake in each quarter.

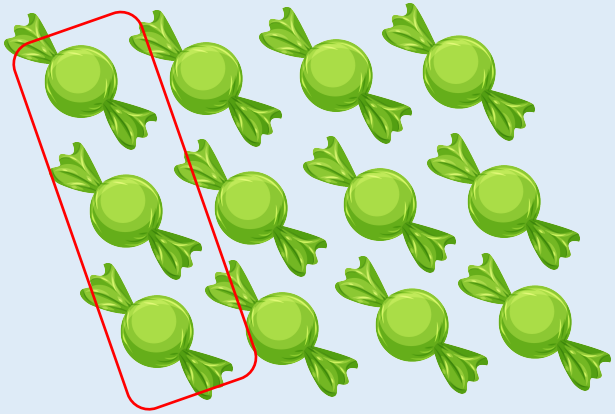
A quarter of 4 is 1



There are 8 peaches.

There are 2 peaches in each quarter.

A quarter of 8 is 2



There are 12 sweets.

There are 3 sweets in each quarter.

A quarter of 12 is 3.

Activity 2 Find a Quarter (2)

Use a range of containers and rice/water. Can you show me a quarter full in each container? Do they look the same or different?

Are my containers the same or different?

Activity 3 Find a Quarter (2)

Use counters to complete the sentences.

A quarter of 4 is ____.

A quarter of 8 is ____.

1 is one quarter of ____.

3 is one quarter of ____.

If I have 2, and it is a quarter, what will the whole look like?

Activity 3 Find a Quarter (2)

Use counters to complete the sentences.

A quarter of 4 is 1.

A quarter of 8 is 2.

1 is one quarter of 4.

3 is one quarter of 12.

Activity 3 Find a Quarter (2)

Use counters to complete the sentences.

A quarter of 12 is ____.

A quarter of 20 is ____.

2 is one quarter of ____.

4 is one quarter of ____.

Activity 3 Find a Quarter (2)

Use counters to complete the sentences.

A quarter of 12 is 3.

A quarter of 20 is 5.

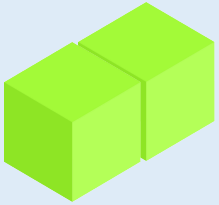
2 is one quarter of 8.

4 is one quarter of 16.

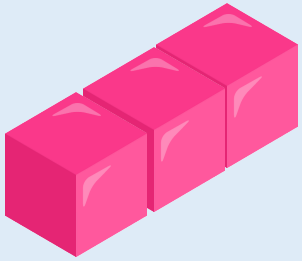
Reasoning - 1

Find a Quarter (2)

One cube is a quarter, what could the whole look like?



Two cubes are a quarter, what could the whole look like?



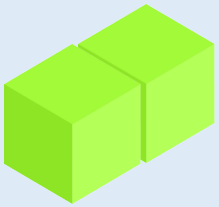
Three cubes are a quarter, what could the whole look like?

How many different possibilities can you make?

Reasoning - 1 Find a Quarter (2)

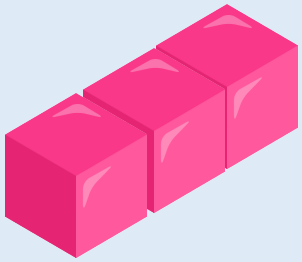
One cube is a quarter, what could the whole look like?

Any arrangement of 4 cubes.



Two cubes are a quarter, what could the whole look like?

Any arrangement of 8 cubes.



Three cubes are a quarter, what could the whole look like?

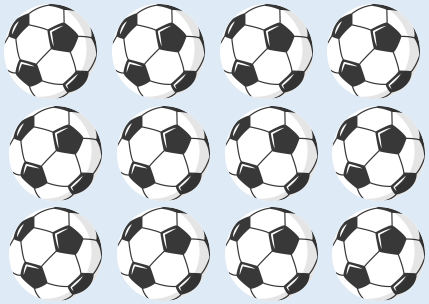
Any arrangement of 12 cubes.

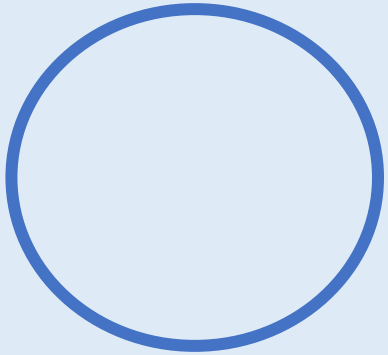
How many different possibilities can you make?

There are many different possibilities which the children will find through their exploration with the multilink.

Reasoning - 2 Find a Quarter (2)

Mr. White has asked his class to put one quarter of the balls into the hoop. Who is correct?
Can you explain any mistakes made?





I'm going to put one ball in the hoop.

Malachi

I'm going to put three balls in the hoop.

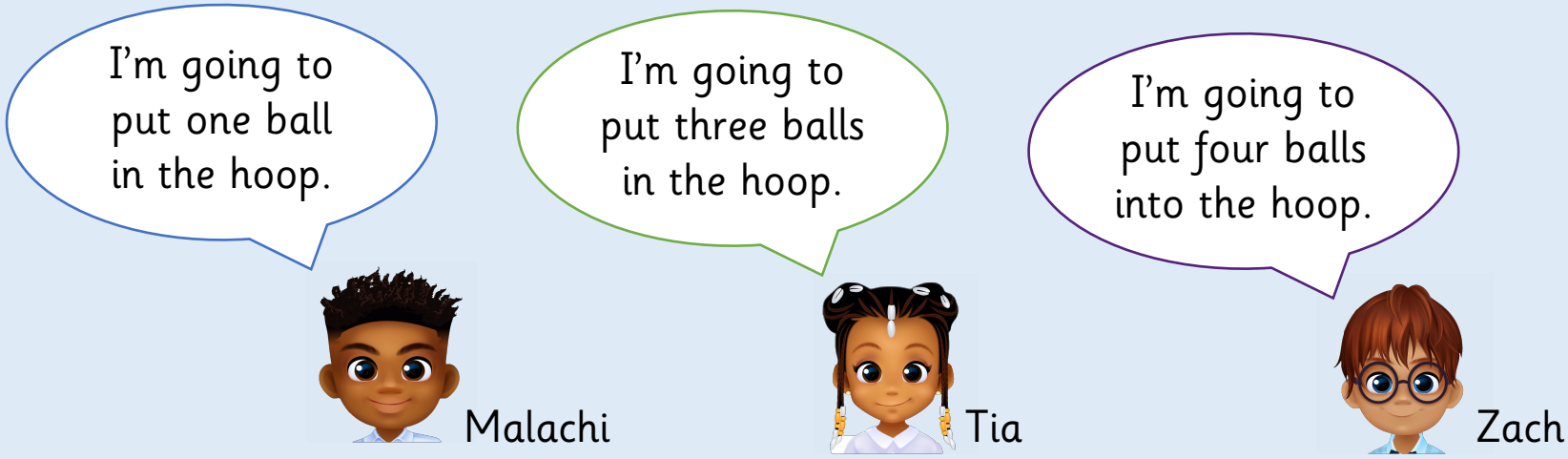
Tia

I'm going to put four balls into the hoop.

Zach

Reasoning - 2 Find a Quarter (2)

Mr. White has asked his class to put one quarter of the balls into the hoop. Who is correct? Can you explain any mistakes made?



Tia is correct because one quarter of 12 is 3.
Malachi has misinterpreted one quarter to just mean one.
Zach knows that quarters are linked to fours but hasn't split the balls into four equal groups.

Discussion

Find a Quarter (2)

How many sweets do I have?

How can I share them equally into four groups?
What is one quarter worth?

Are my containers the same or different?
Can you show me a quarter full in each container.

How can I quarter this amount?
If I have 2, and it is a quarter, what will the whole look like?
What will the whole be worth?