

Maths Workshop – 28.03.18

Topic – Fractions, Measure and Shape

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Aims of today

- To get an insight into what your child is expected to know ahead of the SATs.
- To take away some ideas to support your child at home.
- To work with some other parents and take part in a variety of maths activities.

Fractions – SATs requirements

Children should know and be able to:

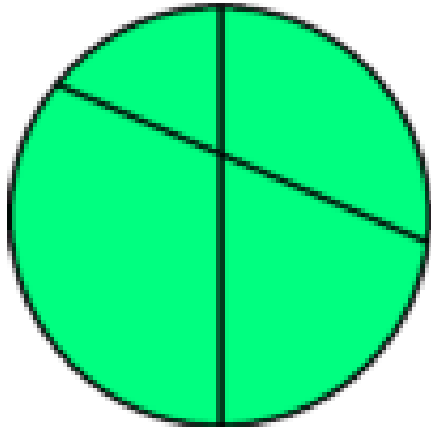
- Find $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, and $\frac{3}{4}$ of a length, shape, set of objects or quantity.
- Recognize that four quarters are equivalent to one whole and that two quarters are equivalent to one half.
- Compare unit fractions such as $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$.
- Add like fractions such as $\frac{1}{4} + \frac{3}{4}$ and $\frac{1}{3} + \frac{2}{3}$.
- Order fractions and equivalence using models.

Fractions

Find $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, and $\frac{3}{4}$ of a length, shape, set of objects or quantity

When we work with fractions, we need the children to understand that this simply means an object (or amount) is divided into equal parts and is therefore worth the same.

One of the common mistakes we have found with some of the children so far is that they forget that fractions are EQUAL, especially when they have to identify fractions in a shape. For example...



...the children can see that this circle has been split into 4 parts and will call this fraction a quarter, when really it isn't.

Fractions

Find $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, and $\frac{3}{4}$ of a length, shape, set of objects or quantity

Finding fractions of a quantity (amount) relies on the children understanding what the fraction is actually asking them to do. For example, $\frac{1}{2}$ of 10 asks the children to split the number 10 into 2 equal groups; $\frac{3}{4}$ of 12 asks the children to first split the number 12 into 4 equal groups and then combine three groups together to find the amount.

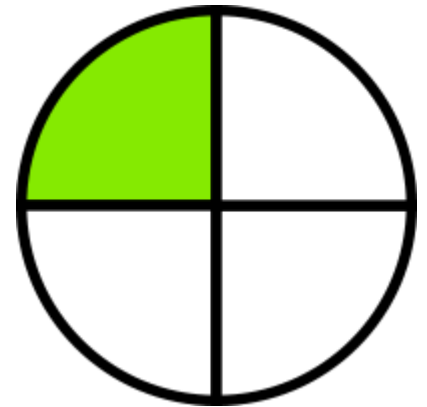
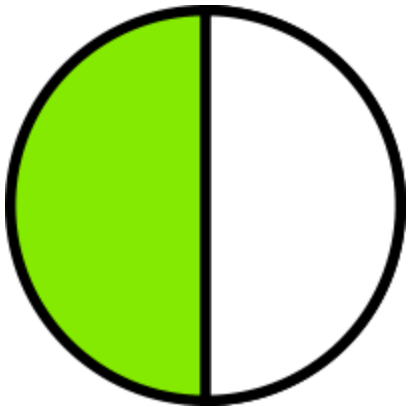
$\frac{1}{3}$ of 18

$\frac{2}{3}$ of 21

Fractions

Compare unit fractions such as $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$.

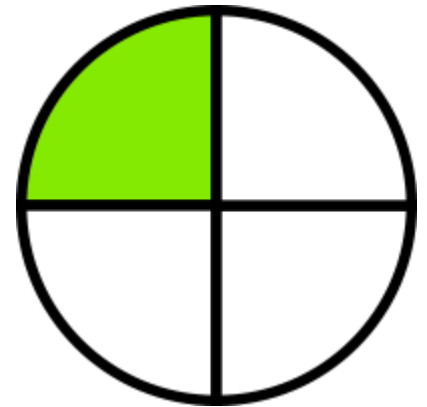
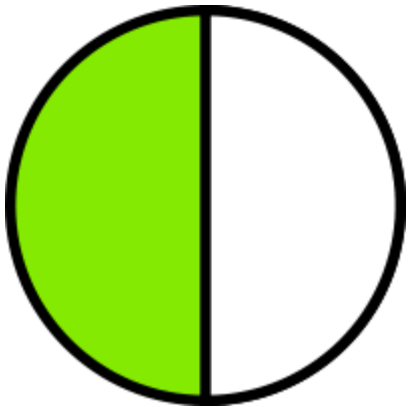
When we use the word 'compare', we are expecting the children to identify which fraction is bigger/smaller than another. This is best done as a visual way so the children can 'see' the size of the fraction next to each other.



Fractions

Compare unit fractions such as $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$.

When we use the word 'compare', we are expecting the children to identify which fraction is bigger/smaller than another. This is best done as a visual way so the children can 'see' the size of the fraction next to each other.

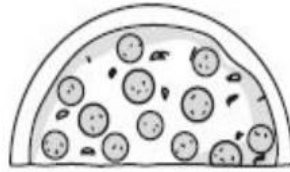


Fractions – Previous SATS questions

Parent Activity Time!

You have on your tables an activity sheet labelled 'Activity 1'. With a partner or as a group, work through the questions to see if you are able to solve these fraction questions.

Ben ate half a pizza.



Activity Answers

Which fraction shows the amount he ate?

Circle it.

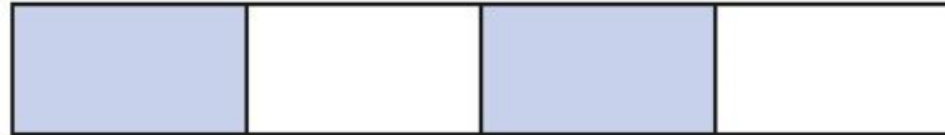
$$\frac{1}{4}$$

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

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

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

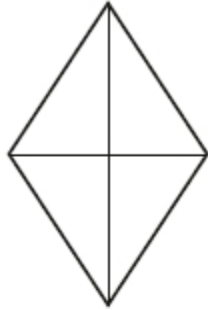
Tick the shape that has exactly $\frac{1}{3}$ shaded.



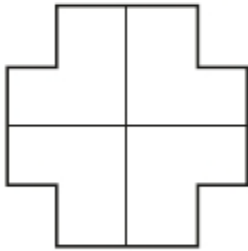
Activity Answers

Shade the fractions of the shapes.

Shade $\frac{1}{2}$



Shade $\frac{3}{4}$



Shade $\frac{1}{3}$

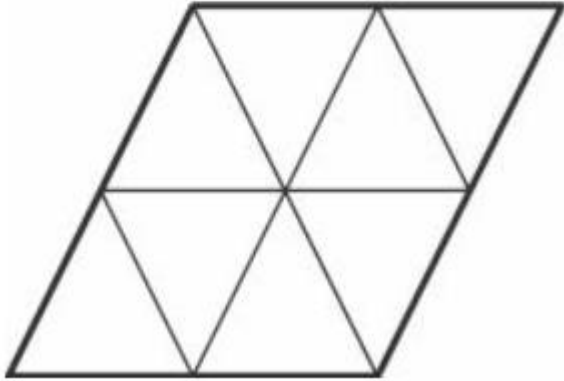


Circle $\frac{1}{3}$ of the apples below.



Activity Answers

Colour $\frac{1}{2}$ of this shape.



Write the missing number to make this correct.

$$\frac{1}{4} \text{ of } 24 = \frac{1}{2} \text{ of } \square$$

Measurement – SATs requirements

Children should know and be able to:

- Estimate and measure length, height, mass, temperature and capacity using appropriate units of measurement using scales and thermometers.
- Combine amounts of money to make a particular value.
- Solve problems in a practical context involving addition and subtraction of money of the same unit, including giving change.
- Be able to make totals/ change up to and including £1.
- Compare and sequence varying intervals of time.
- Know the number of minutes in an hour and the number of hours in a day.
- Tell and write the time to 5 minute intervals past/to the hour and draw then hands on a clock face to show these times.
- Order events according to time.

Measurement

Combine amounts of money to make a particular value

Money is one of the areas that children should do really well in as they are exposed to money daily, however, they do still make mistakes in this area because they do not accurately recall the types of coins and notes that exist. If they do not have a secure knowledge of the coins and notes available to them, this will be a tricky area for the children to solve accurately.



Measurement

Solve problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

Once children can correctly recall the coins and notes that are available, they can then apply this knowledge to solving problems that involve adding and subtracting money.

The children have to be secure in their understanding of addition and subtraction for them to do this correctly, as well as a secure understanding of their place value knowledge too.

Measurement

Tell and write the time to 5 minute intervals past/to the hour and draw then hands on a clock face to show these times

We have seen that the children are very good at knowing their o'clock, half-past and quarter past times, but telling/writing the time to 5 minute intervals is a slightly weaker area.

The children need to practise telling the time as much as possible for them to be able to succeed, so any clock is brilliant to practise with!



Measurement – Previous SATS questions

Parent Activity Time!

You have on your tables an activity sheet labelled 'Activity 2'. With a partner or as a group, work through the questions to see if you are able to solve these measurement questions.

Ben has £19

A game costs £25



Activity Answers

How much **more** money does Ben need to buy the game?

£

Look at these coins:



What is the largest amount you can make using **three** of these coins?

p

Activity Answers

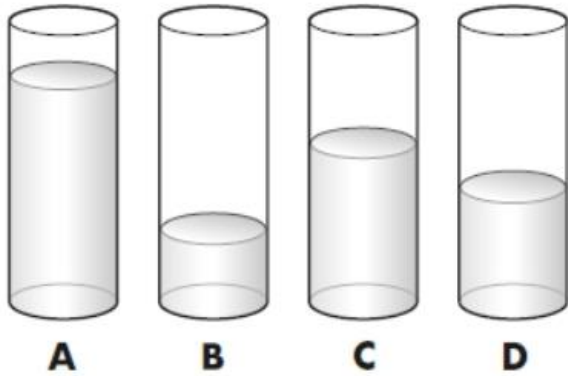
Circle the **shortest** time.

73 minutes

10 minutes

45 minutes

1 hour



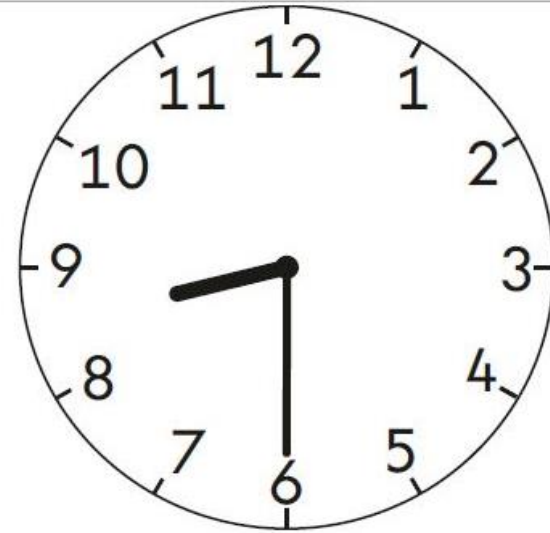
Sort the glasses from **least full** to **most full**.



least full



most full



What time does the clock show?

Tick the correct box.

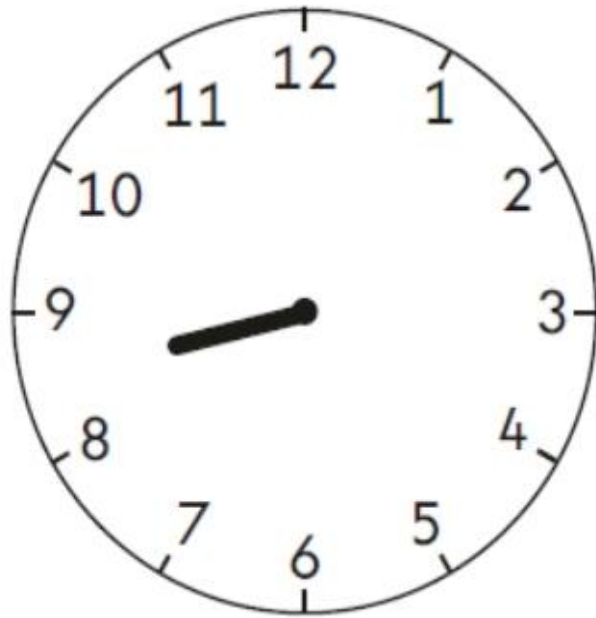
twenty to 6

half past 9

half past 8

quarter to 6

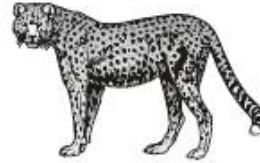
Draw the minute hand on the clock to show twenty-five past eight.



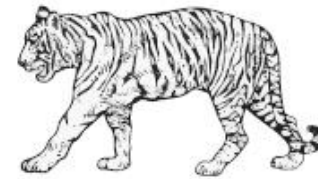
Activity Answers

Abdul goes to the zoo.

He finds out the mass of some animals.



Cheetah
58 kg



Tiger
94 kg



Lion
94 kg

Compare the mass of the animals.

Write $<$ or $>$ or $=$ in each box.

Cheetah's mass

Tiger's mass

Tiger's mass

Lion's mass

Geometry – SATs requirements

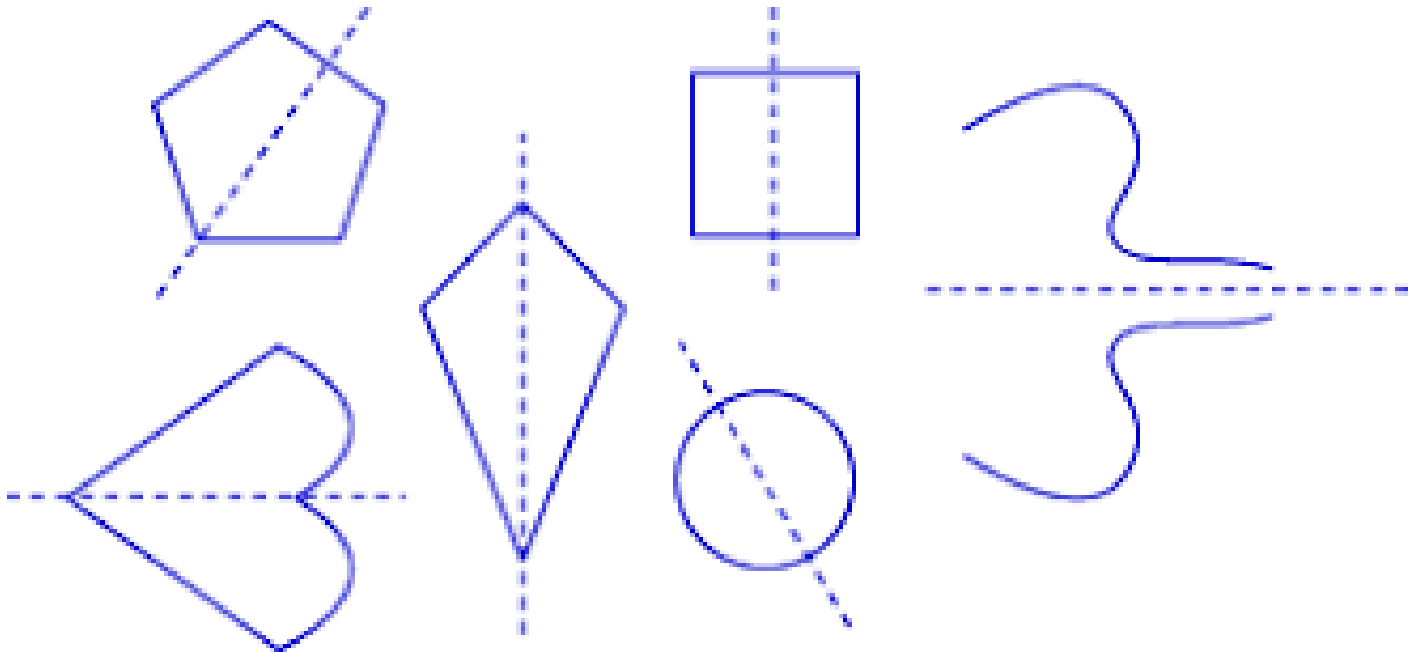
Children should know and be able to:

- Identify (name) and describe the properties of 3-D shapes, including the number of edges, vertices and faces.
- Identify right angles and lines of symmetry on a 2D shape.
- Order and arrange combinations of mathematical objects in patterns and sequences.
- Name and sort additional 2D shapes (pentagon, hexagon, octagon).
- Describe position, direction and movement in terms of right angles for quarter, half and three quarter turns (clockwise and anti-clockwise).
- Distinguish between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).

Geometry

Identify right angles and lines of symmetry on a 2D shape

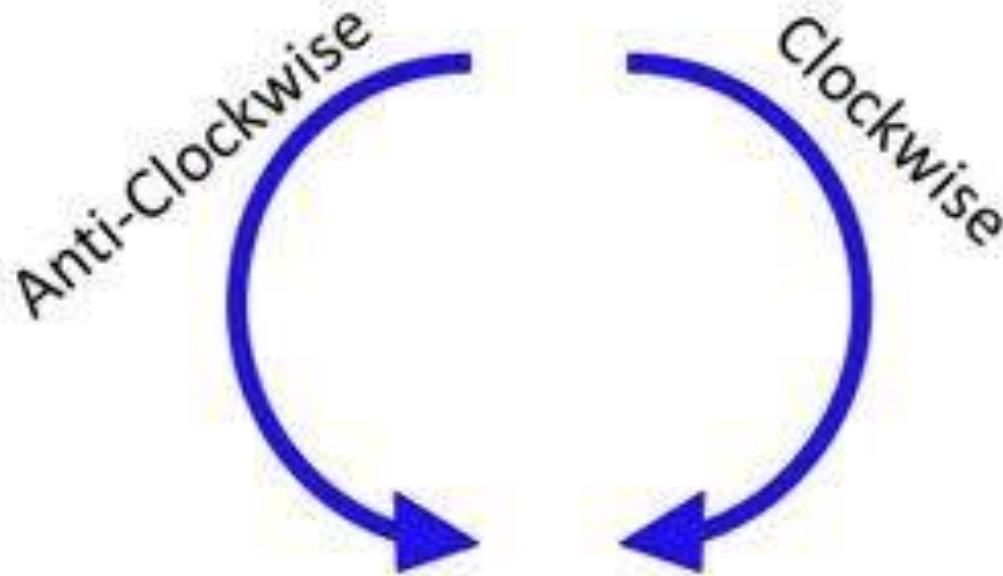
One of the weaker area of the children's is the ability to identify right angles and lines of symmetry. Simply put, a line of symmetry is where you can put a mirror across a shape and have the exact same shape reflected in the mirror. At times, the children will put the line of symmetry simply down the middle of the shape without realising it is not the same shape on both sides of the line.



Geometry

Describe position, direction and movement in terms of right angles for quarter, half and three quarter turns (clockwise and anti-clockwise).

This area of their learning requires the children to understand what a right angle is and how this is used in a turn. A common mistake that they make at the moment is remembering which way is clockwise and which way is anti-clockwise. Remember, CLOCKwise follows the direction of the CLOCK.

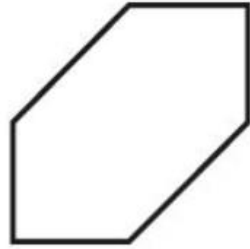
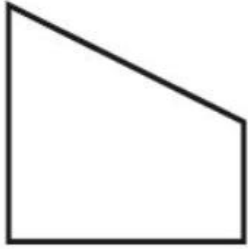


Geometry – Previous SATS questions

Parent Activity Time!

You have on your tables an activity sheet labelled 'Activity 3'. With a partner or as a group, work through the questions to see if you are able to solve these geometry based questions.

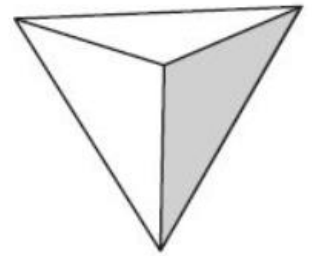
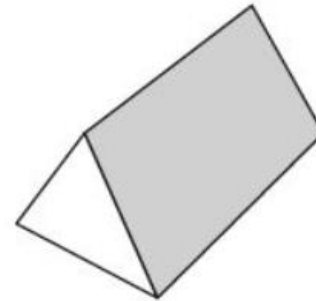
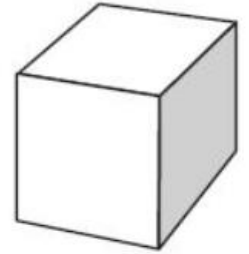
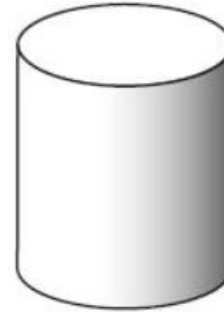
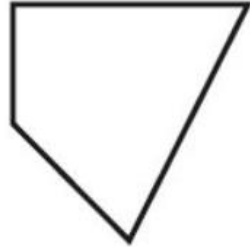
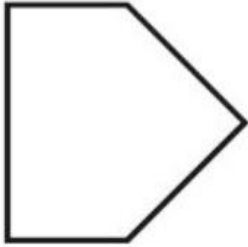
Tick the pentagon.



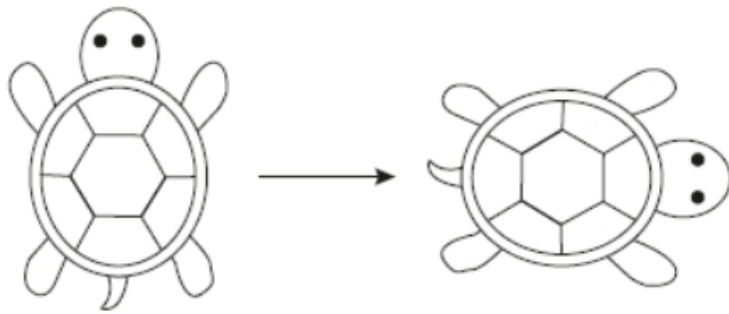
Activity Answers

Two shapes have **more than 8** edges.

Tick them.



This turtle is rotated **clockwise**.



Activity Answers

How much is the turtle rotated?

Circle your answer.

quarter
turn

half
turn

three-quarter
turn

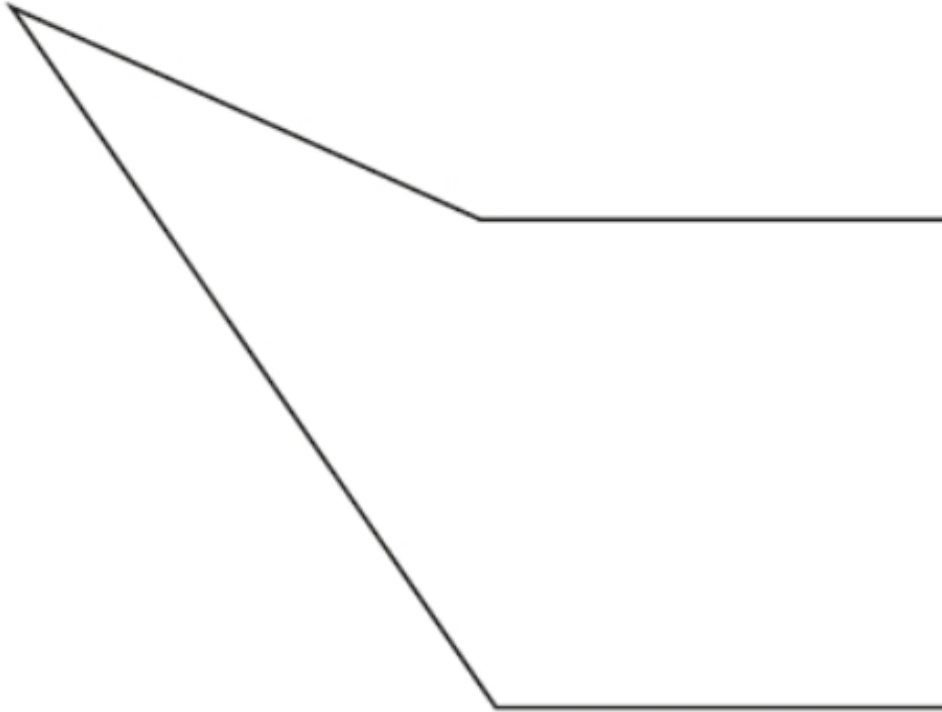
full
turn

Draw a line of symmetry on each of these shapes.



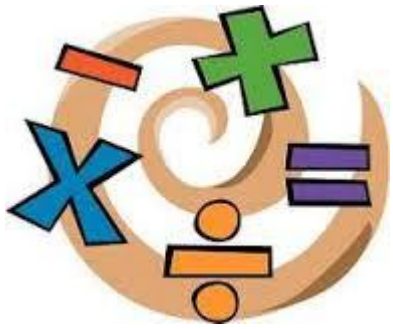
Activity Answers

Look at this shape.



How many **right angles** does it have?

right angles



Any questions?

