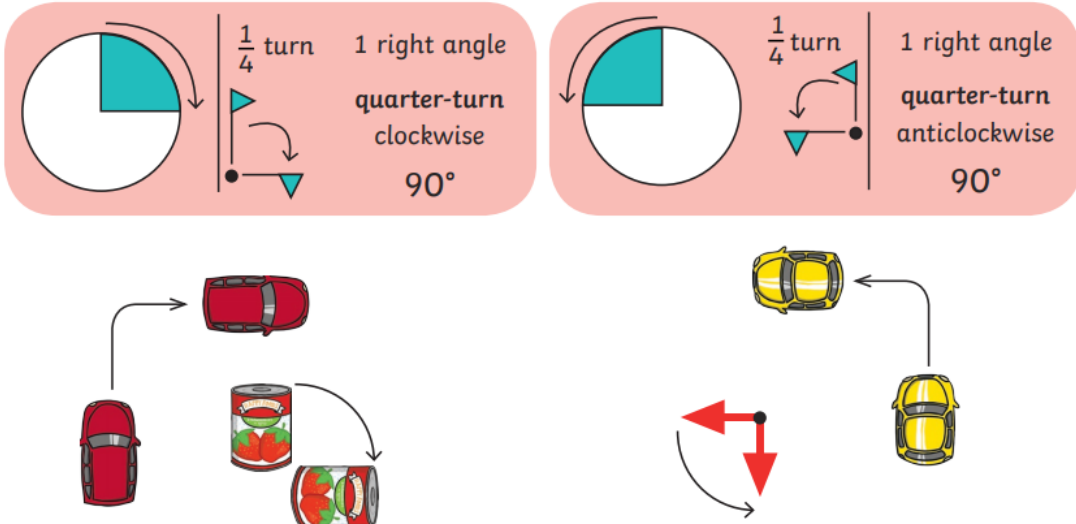# Half Turn and Quarter Turn

When we describe direction, we can use the language of 'quarter turn' and 'half turn'.
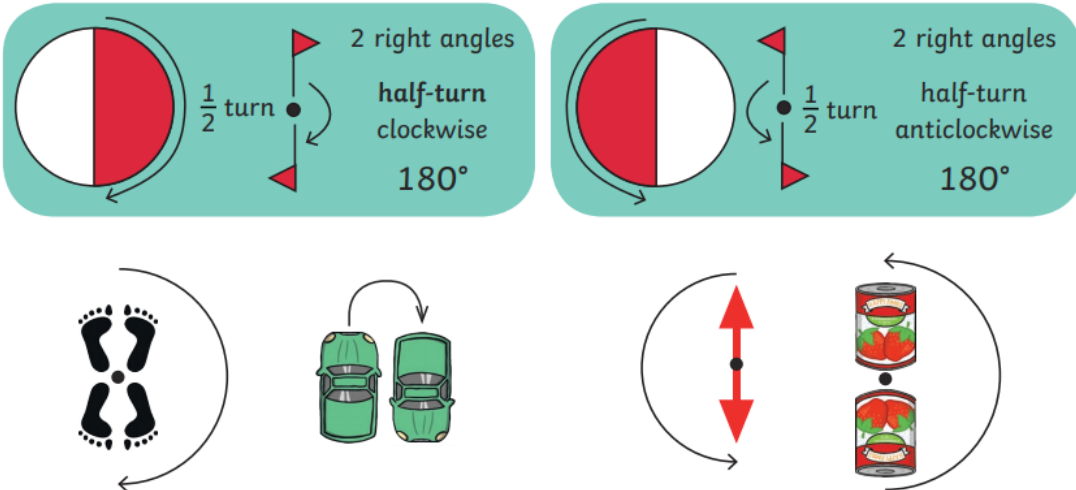
A quarter turn is a turn or rotation of one right angle.
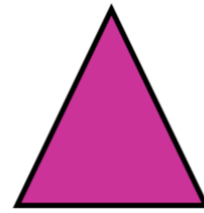
One right angle = **90 degrees**

Quarter Turn

$\frac{1}{4}$ turn · 1 right angle · quarter-turn clockwise · 90°

$\frac{1}{4}$ turn · 1 right angle · quarter-turn anticlockwise · 90°

Half Turn

2 right angles · half-turn clockwise · $\frac{1}{2}$ turn · 180°

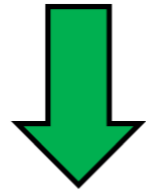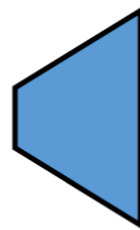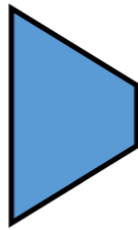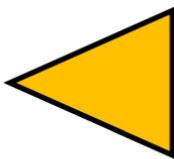2 right angles · half-turn anticlockwise · $\frac{1}{2}$ turn · 180°

Describe turns

▨ Give the children instructions using the language 'quarter turn', 'half turn', 'three quarters turn' and 'full turn'. Children could then work in pairs to give and follow directions. This could be developed into a routine with music or as the children line up.

▨ Draw what each shape will look like once it has turned a:

- quarter turn
- half turn
- three-quarter turn
- full turn

▨ Complete the sentence to describe the turns these shapes have made.

The shape has turned a _____ turn.

Questions for discussions

What is each turn called?
Is there only one direction shapes/objects can move in?

Does it make a difference which way the shape / object / person is turned?

What part of a whole has the shape/object turned?
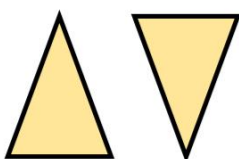What will the shape/object look like before or after the turn?

Reasoning and problem solving

Are these statements correct?
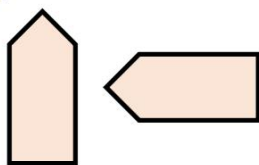Is there more than one answer?
Explain how you know.

The shape has made a quarter turn.

The shape has made a half turn.

The shape has made a three-quarter turn.

Alex turns her number shape and it finishes facing this direction.
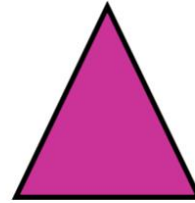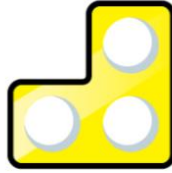
What direction could it have started facing?

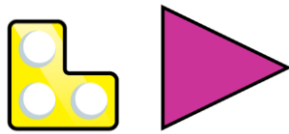What turn could it have made?

Answers

Draw what each shape will look like once it has turned a:
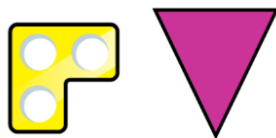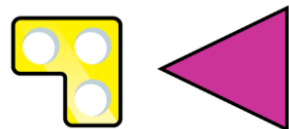
- quarter turn
- half turn
- three-quarter turn
- full turn
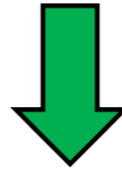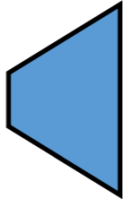
Quarter turn
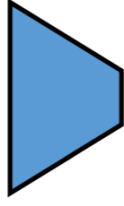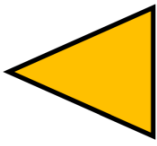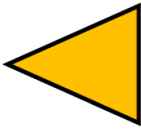
Half turn

Three-quarter turn

Full turn

Complete the sentence to describe the turns these shapes have made.

The shape has turned a _____ turn.

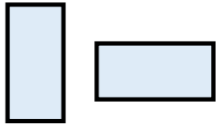The shape has turned a three quarter turn.
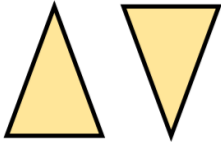
The shape has turned a half turn.

The shape has turned a full turn.

Are these statements correct?
Is there more than one answer?
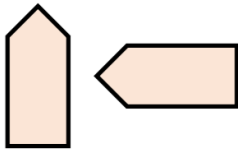Explain how you know.

The shape has made a quarter turn.

Correct in either direction. It could also be a three-quarter turn in either direction.

The shape has made a half turn.

Correct in either direction.

The shape has made a three-quarter turn.

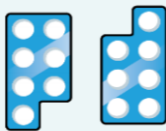The shape could have made a three-quarter turn clockwise or a quarter turn anti-clockwise.

Alex turns her number shape and it finishes facing this direction.
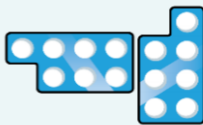
What direction could it have started facing?
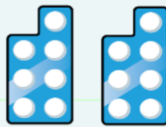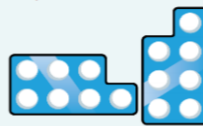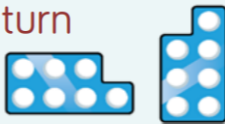
What turn could it have made?

A half turn.

A quarter turn

A whole turn

A quarter turn

A three-quarter turn

A three-quarter turn