

Step 1

Turns and Angles

Introduction

Match the starting clock to the durations and the turns that it has made.

Start



+ 30 mins



**Half turn
clockwise**

+ 45 mins



**Quarter turn
clockwise**

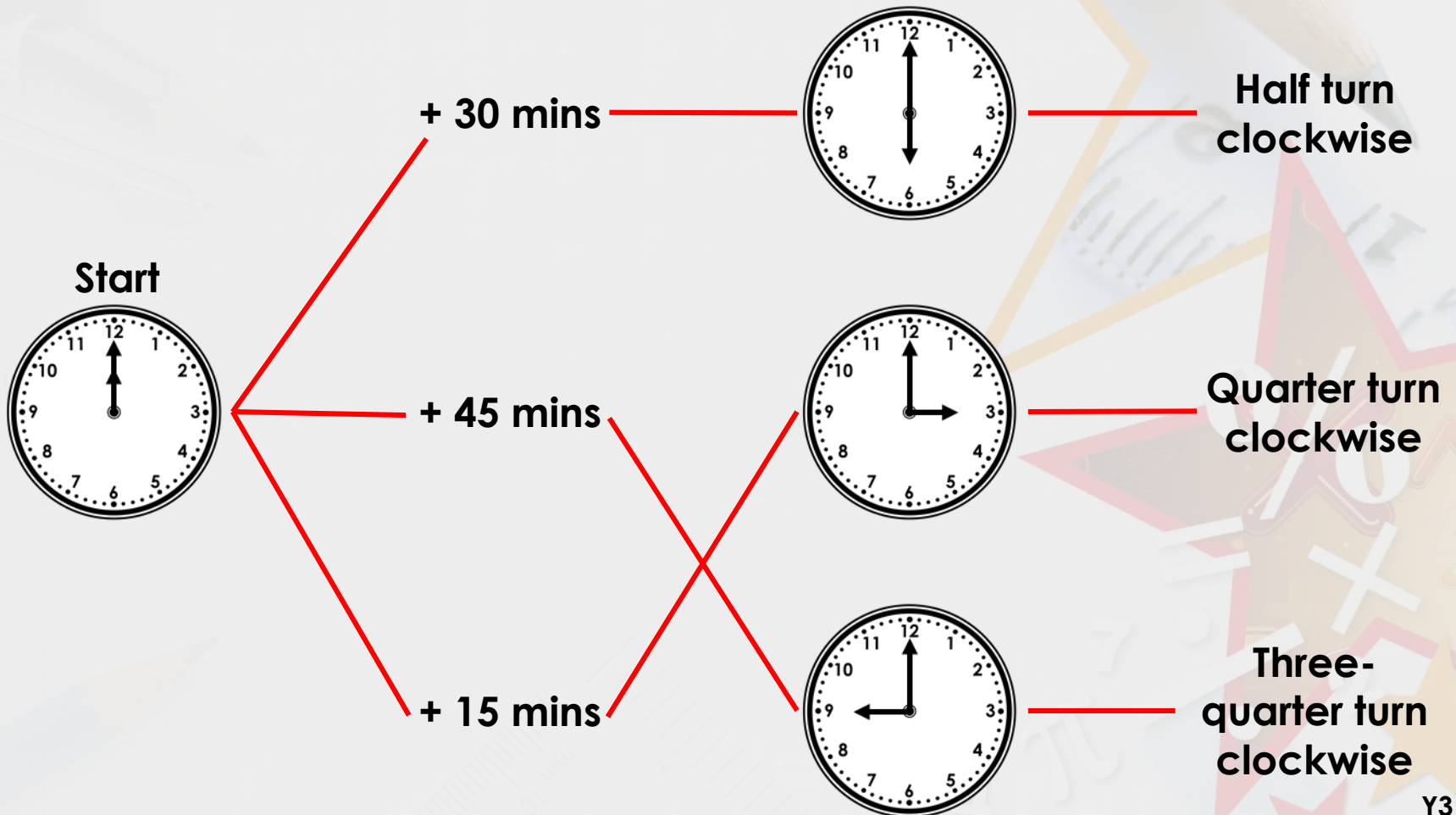
+ 15 mins



**Three-
quarter turn
clockwise**

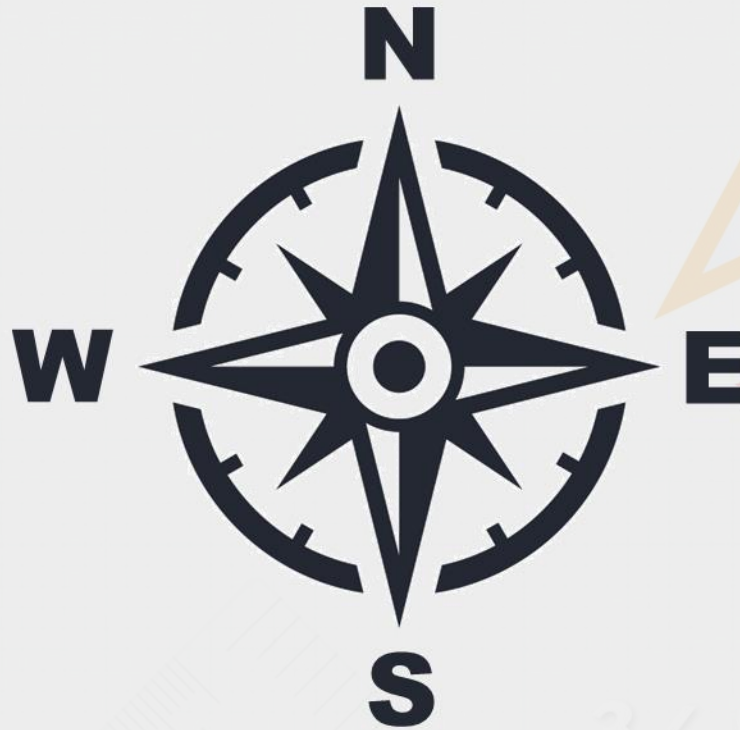
Introduction

Match the starting clock to the durations and the turns that it has made.



Varied Fluency 1

**Start at east.
Turn three quarters clockwise.
Which direction are you now facing?**



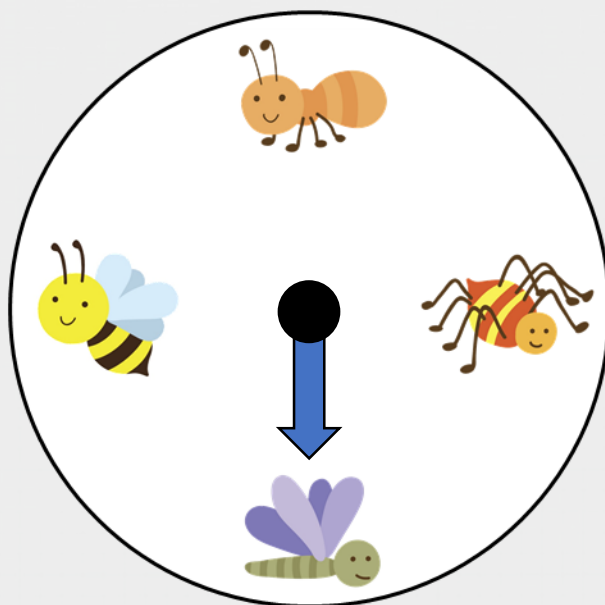
Varied Fluency 1

**Start at east.
Turn three quarters clockwise.
Which direction are you now facing?**



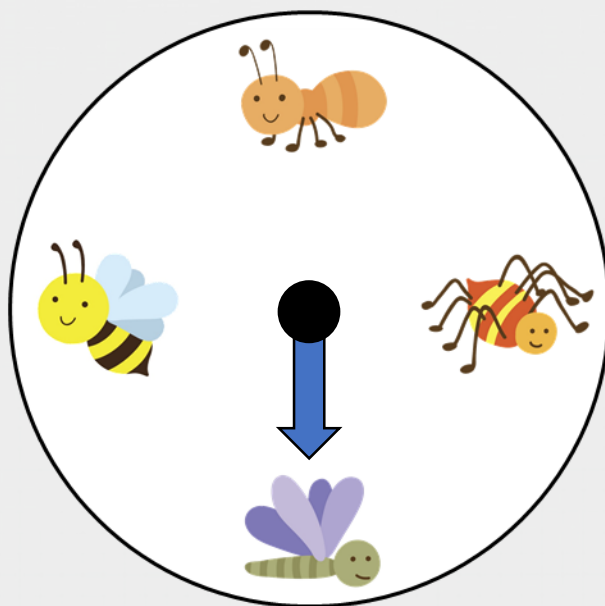
Varied Fluency 2

What turn does the spinner need to make to get from the dragonfly to the spider?



Varied Fluency 2

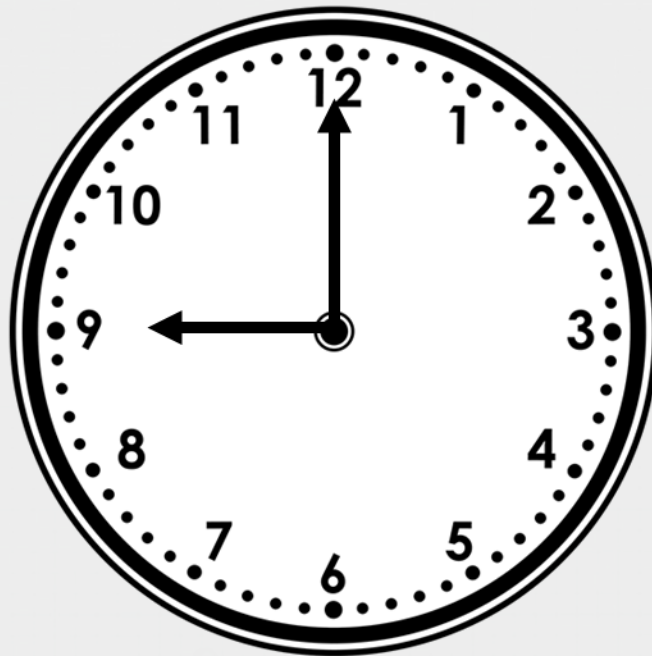
What turn does the spinner need to make to get from the dragonfly to the spider?



A quarter turn anti-clockwise or a three-quarter turn clockwise.

Varied Fluency 3

If the hour hand is turned a $\frac{1}{4}$ turn, what time will it be?

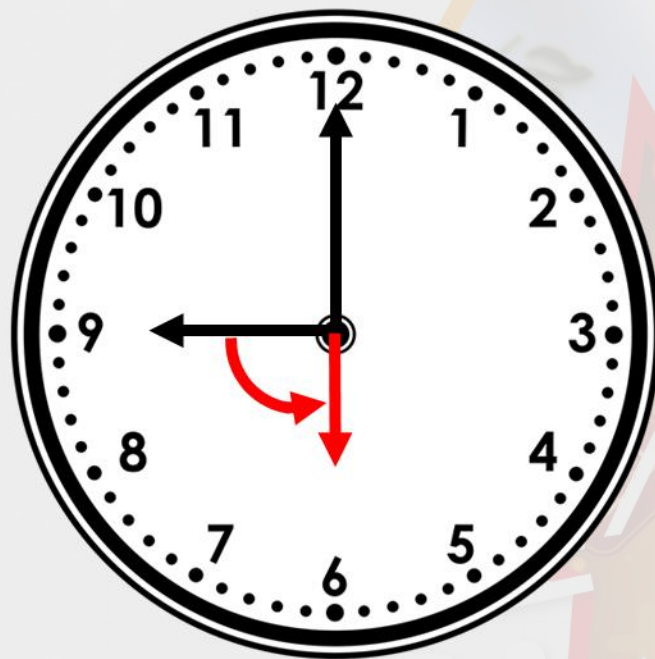


Varied Fluency 3

If the hour hand is turned a $\frac{1}{4}$ turn, what time will it be?



12 o'clock



6 o'clock

Varied Fluency 4

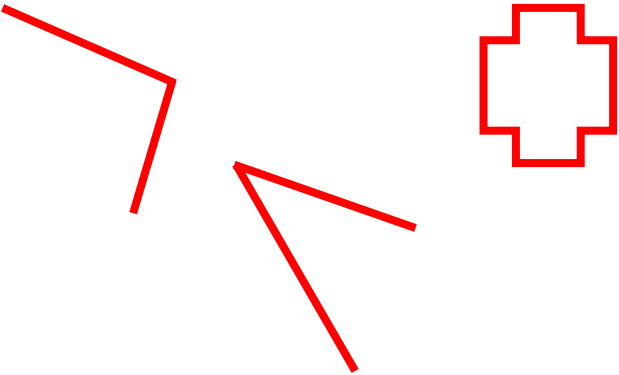

Sort these images into the table.

All lines make angles	Not all lines make angles



Varied Fluency 4

Sort these images into the table.

All lines make angles	Not all lines make angles
	

Problem Solving 1

Iqbal is thinking of a shape.

He says,



The shape has 6 angles that
are the same size.

Draw the shape that he is thinking of.

Problem Solving 1

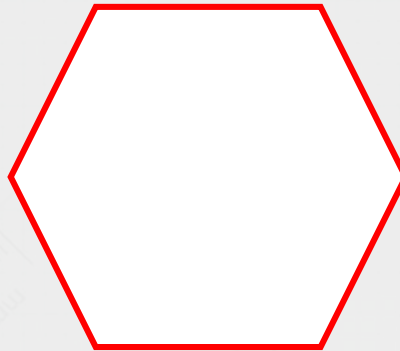
Iqbal is thinking of a shape.

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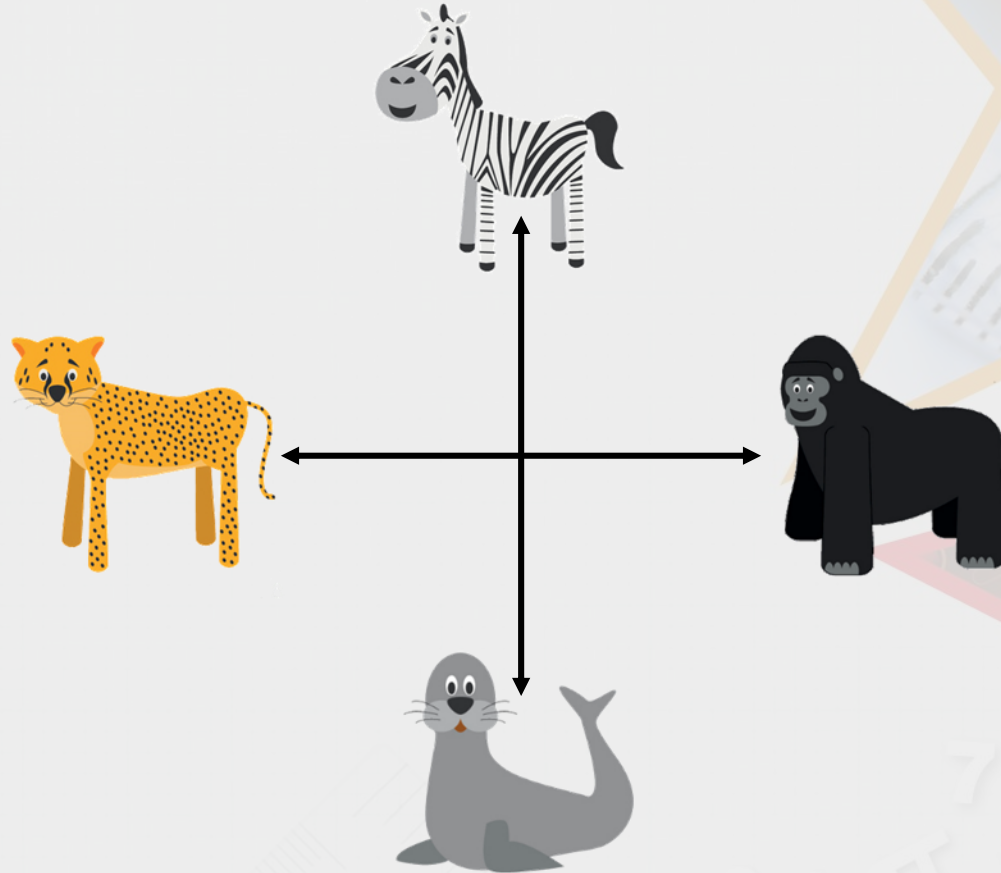
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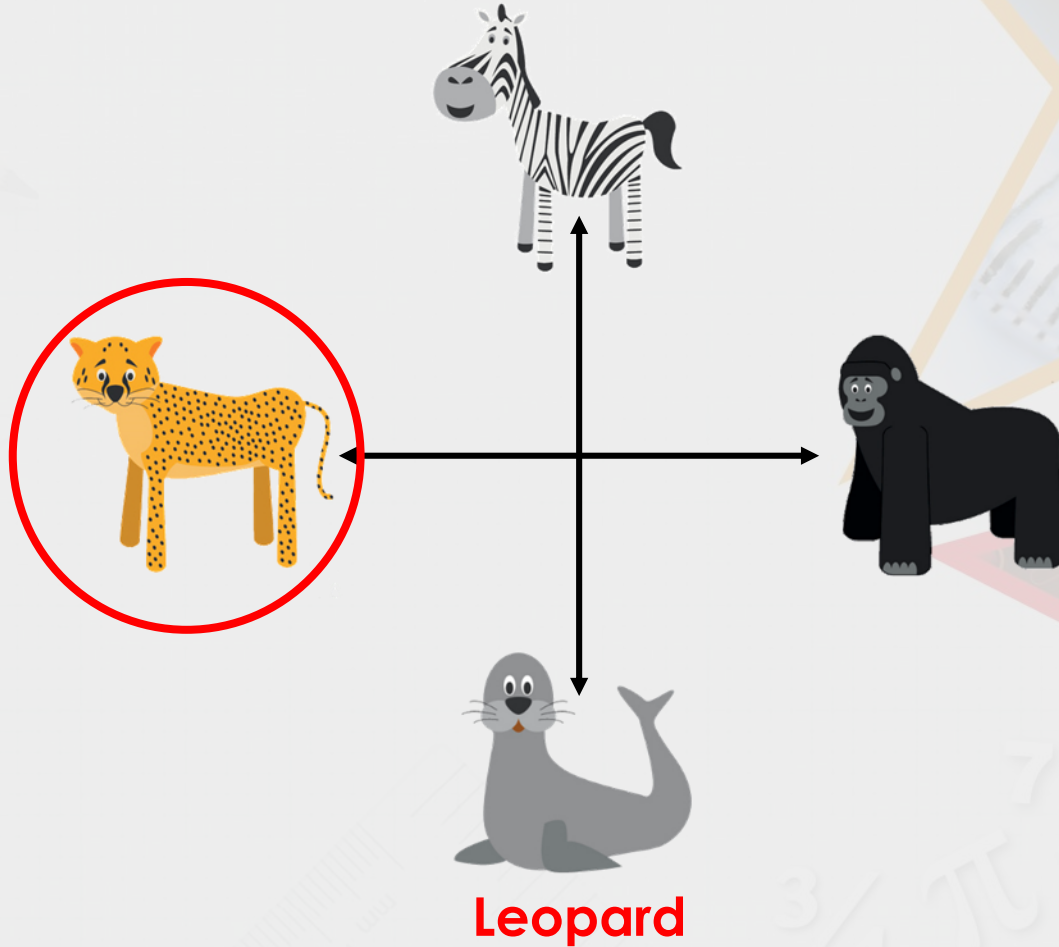
Problem Solving 2

After a three quarter turn anti-clockwise, you are now facing the zebra. Which animal were you facing when you started?



Problem Solving 2

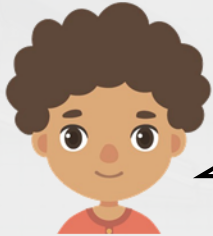
After a three quarter turn anti-clockwise, you are now facing the zebra. Which animal were you facing when you started?



Reasoning 1

A compass needle has moved from south to north.

Jon says,



It has moved a half turn clockwise.



Fiona says,

It has moved a half turn anti-clockwise.

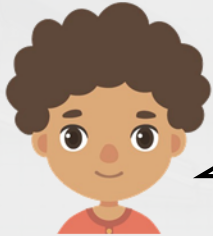


Who is correct? Explain how you know.

Reasoning 1

A compass needle has moved from south to north.

Jon says,

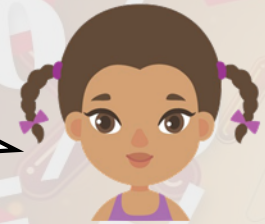


It has moved a half turn clockwise.



Fiona says,

It has moved a half turn anti-clockwise.



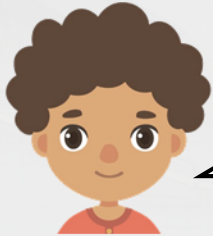
Who is correct? Explain how you know.

Both Jon and Fiona could be correct because...

Reasoning 1

A compass needle has moved from south to north.

Jon says,

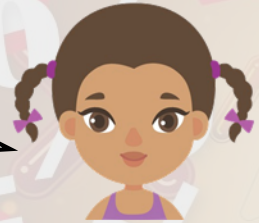


It has moved a half turn clockwise.



Fiona says,

It has moved a half turn anti-clockwise.



Who is correct? Explain how you know.

Both Jon and Fiona could be correct because a half turn in either direction from the same starting point will end up at north.