

Name

Date



# EXPLORING 2D SHAPES SHEET 1

## ALWAYS, SOMETIMES OR NEVER TRUE?

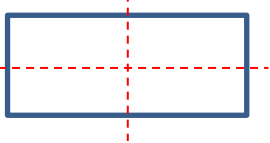


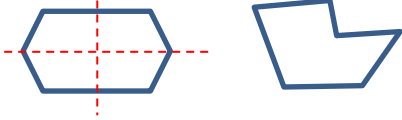
For each of the statements below, tick whether they are always true, sometimes true or never true. Can you explain your reasoning by drawing or writing?

	STATEMENT	ALWAYS, SOMETIMES OR NEVER TRUE?	REASONING
1)	A triangle has 3 sides.	ALWAYS SOMETIMES NEVER	
2)	A rectangle has a line of symmetry.	ALWAYS SOMETIMES NEVER	
3)	A triangle has a right angle.	ALWAYS SOMETIMES NEVER	
4)	A triangle has 2 right angles.	ALWAYS SOMETIMES NEVER	
5)	A hexagon has a line of symmetry.	ALWAYS SOMETIMES NEVER	
6)	A triangle has an acute angle.	ALWAYS SOMETIMES NEVER	



# EXPLORING 2D SHAPES SHEET 1 ANSWERS

## ALWAYS, SOMETIMES OR NEVER TRUE?

	STATEMENT	ALWAYS, SOMETIMES OR NEVER TRUE?	REASONING
1)	A triangle has 3 sides.	<b>ALWAYS</b> SOMETIMES NEVER	All triangle have to have 3 sides, or the shape is not a triangle.
2)	A rectangle has a line of symmetry.	<b>ALWAYS</b> SOMETIMES NEVER	All rectangles have at least 2 lines of symmetry. 
3)	A triangle has a right angle.	ALWAYS <b>SOMETIMES</b> NEVER	Some triangles have a right angle (and some do not). 
4)	A triangle has 2 right angles.	ALWAYS SOMETIMES <b>NEVER</b>	No triangle can have 2 right angles. The shape below cannot be made into a triangle! 
5)	A hexagon has a line of symmetry.	ALWAYS <b>SOMETIMES</b> NEVER	Some hexagons have a line of symmetry. 
6)	A triangle has an acute angle.	<b>ALWAYS</b> SOMETIMES NEVER	All triangle have to have at least 2 acute angles. <i>Proof – Angles in a triangle have to add up to 180°.</i> <i>If one of the angles is NOT acute (i.e. it is 90° or more). Then the two remaining angles must add up to 90° or less – since the angles cannot be 0°, they must both be acute angles less than 90°.</i>