EXPLORING 2D SHAPES SHEET 5 ANSWERS

ALWAYS, SOMETIMES OR NEVER TRUE?

	STATEMENT	ALWAYS, SOMETIMES OR NEVER TRUE?	REASONING
1)	A trapezoid has exactly one right angle.	ALWAYS SOMETIMES **NEVER**	A trapezoid either has none, two or four right angles. (*)
2)	The diameter of a circle is half the radius.	ALWAYS SOMETIMES **NEVER**	The radius of a circle is always equal to half the diameter, not the other way round!
3)	The opposite angles of a parallelogram are equal.	**ALWAYS** SOMETIMES NEVER	This is always true. **Equal angles:** The red angles are equal. The blue angles are equal.
4)	A kite has a line of symmetry.	**ALWAYS** SOMETIMES NEVER	All kites have at least one line of symmetry.
5)	A triangle has exactly two mirror lines.	ALWAYS SOMETIMES **NEVER**	A triangle can have none, one or three lines of symmetry but never two!
6)	A parallelogram has exactly two lines of symmetry.	ALWAYS **SOMETIMES** NEVER	Parallelograms can have 0, 2 or 4 lines of symmetry. This rectangle, which is a parallelogram, has two.

(*) Most mathematicians define a trapezoid as have at least one pair of parallel lines (therefore including squares, rectangles, parallelograms, etc as special cases of a trapezoid).