FOUNDATION & HIGHER

SAME AT BOTH TIERS

Name ..... Class .....

G4: Properties of shapes

Properties of special quadrilaterals and triangles

20 marks · 25 minutes · Non-calculator

1) Name the quadrilateral described.

(a) Four equal sides and no right angles

.....

(1)

(b) Exactly one pair of parallel sides

.....

(1)

(c) Diagonals equal in length, crossing at right angles and bisecting each other

.....

(1)

(d) Two pairs of equal adjacent sides and no parallel sides

.....

(1)

[Question 1: 4 marks]

2) One angle of a rhombus is 64°. Find the sizes of the other three angles.

..... °

[Question 2: 2 marks]

3) *ABCD* is a parallelogram. Angle $A = 72°$.

(a) Find angle *B*.

..... °

(1)

(b) Find angle *C*.

..... °

(1)

[Question 3: 2 marks]

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4) A kite has two equal angles of 110°. Its third angle is 80°. Find its fourth angle.

..... °

[Question 4: 2 marks]

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5) Is each statement true or false?

(a) Every square is a rhombus.

.....

(1)

(b) Every rectangle is a square.

.....

(1)

(c) A trapezium can have a right angle.

.....

(1)

[Question 5: 3 marks]

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6) Name the type of triangle.

(a) All three sides are different lengths.

.....

(1)

(b) Exactly two sides are the same length.

.....

(1)

(c) Its angles are 90°, 45° and 45°.

.....

(1)

[Question 6: 3 marks]

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7) Do the diagonals of every rectangle cross at right angles? Give a reason.

.....

[Question 7: 1 marks]

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8) An isosceles trapezium has an angle of 75°. Find the sizes of its other three angles.

..... °

[Question 8: 2 marks]

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9) At what angle do the diagonals of a rhombus cross?

..... °

[Question 9: 1 marks]

End of paper – 20 marks in total

Answers and brief mark scheme

Q	Answer	Method / notes
1	(a) rhombus (b) trapezium (c) square (d) kite	B1 each.
2	116, 64, 116	Co-interior angles 180 − 64 (M1); all three (A1).
3	(a) 108 (b) 72	B1 each.
4	60	Sum 360 (M1); A1.
5	(a) true (b) false (c) true	B1 each.
6	(a) scalene (b) isosceles (c) right-angled isosceles	B1 each.
7	No; only when it is a square	B1.
8	75, 105, 105	180 − 75 (M1); A1.
9	90	B1.