Geometry: 10 practice questions

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Name: _____ Date: _____

Attempt all questions and show your working. Suggested time: 15 to 20 minutes.

Section A: Consolidating (Questions 1-4)

Question 1

Name the polygon with:

(a) 5 sides

(b) 6 sides

(c) 8 sides

Question 2

Classify each triangle as equilateral, isosceles or scalene.

(a) Sides 5 cm, 5 cm, 5 cm

(b) Sides 4 cm, 6 cm, 7 cm

(c) Sides 3 cm, 3 cm, 5 cm

Question 3

Classify each triangle as acute-angled, right-angled or obtuse-angled.

(a) Angles 30°, 60°, 90°

(b) Angles 40°, 60°, 80°

(c) Angles 20°, 30°, 130°

Question 4

Name the quadrilateral that has four equal sides and four right angles.

Section B: Standard (Questions 5-10)

Question 5

Classify each triangle by both its angles and its sides (for example, "acute scalene").

(a) Angles 45°, 45°, 90°

(b) Angles 60°, 60°, 60°

(c) Angles 25°, 25°, 130°

(d) Angles 50°, 60°, 70°

Question 6

Copy and complete the table with Yes or No. Write Yes only if the shape must always have the property.

Property	Square	Rectangle	Rhombus	Parallelogra	Kite	Trapezium
All sides equal	?	?	?	?	?	?
Both pairs of opposite sides parallel	?	?	?	?	?	?
All angles 90°	?	?	?	?	?	?
Diagonals cross at right angles	?	?	?	?	?	?

Question 7

Write true or false for each statement.

(a) Every square is a rectangle.

(b) Every rectangle is a square.

(c) Every rhombus is a parallelogram.

(d) A kite always has two pairs of equal sides that are next to each other.

Question 8

Name each quadrilateral.

(a) It has exactly one pair of parallel sides.

(b) It has two pairs of equal sides next to each other, and no parallel sides.

(c) It has four equal sides but no right angles.

(d) Its opposite sides are equal and parallel, all its angles are 90°, and its length and width are different.

Question 9

(a) What makes a polygon regular?

(b) Is a rectangle measuring 4 cm by 6 cm a regular polygon? Explain.

(c) Is a rhombus with angles of 60° and 120° a regular polygon? Explain.

Question 10

(a) Explain the difference between a convex polygon and a concave polygon.

(b) A pentagon has one interior angle of 200°. Is it convex or concave?

Geometry: answers

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Question 1

Answer: (a) pentagon (b) hexagon (c) octagon

Question 2

Answer: (a) equilateral (b) scalene (c) isosceles

Question 3

Answer: (a) right-angled (b) acute-angled (c) obtuse-angled

Question 4

Answer: square

Question 5

Answer: (a) right isosceles (b) acute equilateral (c) obtuse isosceles (d) acute scalene

Question 6

Answer: All sides equal: square Yes, rhombus Yes, all others No. Both pairs parallel: square, rectangle, rhombus, parallelogram Yes; kite, trapezium No. All angles 90°: square, rectangle Yes; all others No. Diagonals at right angles: square, rhombus, kite Yes; rectangle, parallelogram, trapezium No.

Question 7

Answer: (a) True (b) False (c) True (d) True

Question 8

Answer: (a) trapezium (b) kite (c) rhombus (d) rectangle

Question 9

Answer: (a) All its sides are equal and all its angles are equal. (b) No, its sides are not all equal. (c) No, its angles are not all equal.

Question 10

Answer: (a) A convex polygon has every interior angle less than 180° (no corner points inwards); a concave polygon has at least one interior angle greater than 180°. (b) concave