2.12-3 Angles and Shape: Practice Set 3: 10-minute Pack

GL ASSESSMENT GL · Calculators not allowed · about 10 minutes

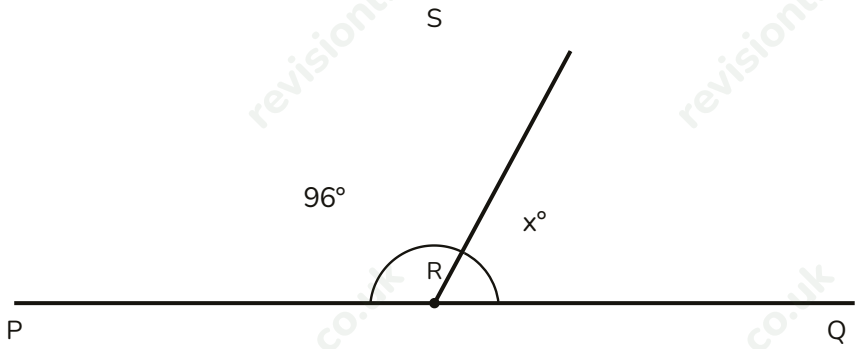
Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A straight line PQ passes through point R. A ray RS is drawn from R, splitting angle PRQ into two angles: angle PRS = 96 degrees and angle SRQ = x degrees. Calculate the value of x.

Diagram NOT accurately drawn



(not to scale)

(2)

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2 Which of these is NOT a property of a square?

- ☐ A) It has four right angles
- ☐ B) It has four equal sides
- ☐ C) It has exactly one pair of parallel sides
- ☐ D) Its diagonals bisect each other

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3 For each pair of angles, state whether they are complementary, supplementary, or neither.

(a) 38 degrees and 52 degrees. **(1)**

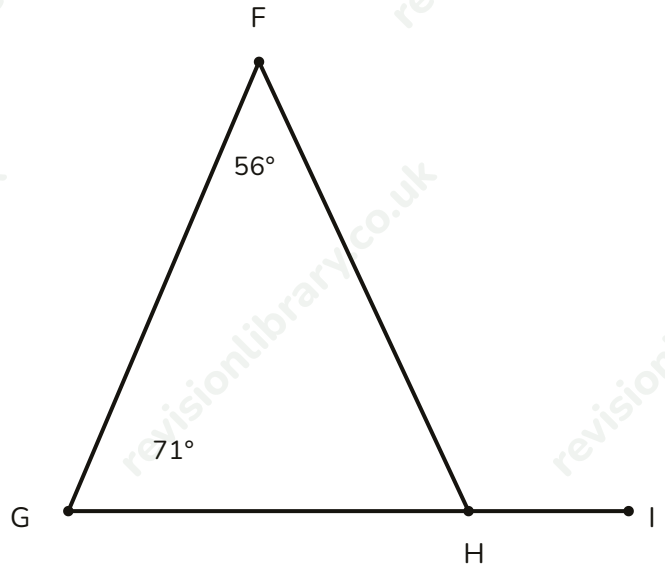
(b) 112 degrees and 68 degrees. **(1)**

(c) 35 degrees and 45 degrees. **(1)**

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4 In triangle FGH, angle F = 56 degrees and angle G = 71 degrees. Side GH is extended to a point I, so that angle FHI is the exterior angle of the triangle at H.

Diagram NOT accurately drawn



Not to scale

(a) Calculate the size of angle FHG, the interior angle at H. **(2)**

.....

(b) Hence calculate the size of the exterior angle FHI. **(2)**

.....

5 The points (1, 1), (5, 1), (5, 4) and (1, 4) are joined in order to form a quadrilateral. State the mathematical name of the quadrilateral formed, giving a reason.

(2)

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Mark scheme · 2.12-3 Angles and Shape: Practice Set 3: 10-minute Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

180 - 96 seen (angles on a straight line sum to 180 degrees)	**M1**
84 degrees cao	**A1**

Answer: x = 84 degrees

Question 2

C cao	**B1**

Answer: C) It has exactly one pair of parallel sides

Question 3

(a) complementary cao	**B1**

(a) Answer: complementary

(b) supplementary cao	**B1**

(b) Answer: supplementary

(c) neither cao	**B1**

(c) Answer: neither

Question 4

(a) 180 - 56 - 71 seen	**M1**
(a) 53 degrees cao	**A1**

(a) Answer: angle FHG = 53 degrees

(b) 180 - their (a) seen, or 56 + 71 (exterior angle = sum of the two opposite interior angles)	**M1**
(b) 127 degrees cao (ft)	**A1**

(b) Answer: angle FHI = 127 degrees

Question 5

rectangle cao	**B1**
valid reason, e.g. opposite sides are equal and parallel (4 units and 3 units) and all angles are 90 degrees, but adjacent sides are not equal so it is not a square	**B1**

Answer: rectangle

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