2.12-2 Angles and Shape: Practice Set 2: Test Pack

GL ASSESSMENT GL · Calculators not allowed · about 15 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Choose the correct description of each angle below.

(a) An angle of 24 degrees. **(1)**

- ☐ A) acute
- ☐ B) right angle
- ☐ C) obtuse
- ☐ D) straight
- ☐ E) reflex

(b) An angle of 90 degrees. **(1)**

- ☐ A) acute
- ☐ B) right angle
- ☐ C) obtuse
- ☐ D) straight
- ☐ E) reflex

(c) An angle of 137 degrees. **(1)**

- ☐ A) acute
- ☐ B) right angle
- ☐ C) obtuse
- ☐ D) straight
- ☐ E) reflex

(d) An angle of 180 degrees. **(1)**

- ☐ A) acute
- ☐ B) right angle
- ☐ C) obtuse
- ☐ D) straight
- ☐ E) reflex

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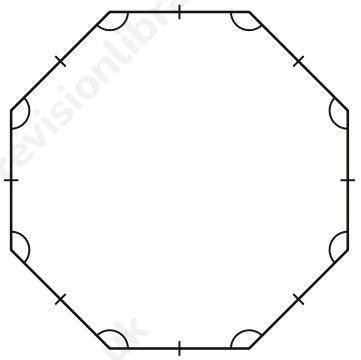
(e) An angle of 274 degrees. **(1)**

- ☐ A) acute
- ☐ B) right angle
- ☐ C) obtuse
- ☐ D) straight
- ☐ E) reflex

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2 A regular octagon has eight equal sides and eight equal angles.

Diagram NOT accurately drawn



(not to scale)

(a) Calculate the size of one exterior angle of the octagon. **(2)**

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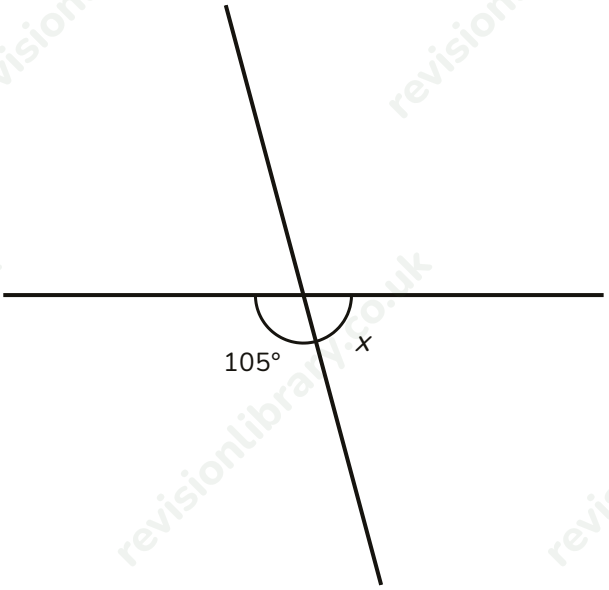
(b) Hence calculate the size of one interior angle of the octagon. **(2)**

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3 Two straight lines cross at a point, forming four angles. One of the angles is 105 degrees.

Diagram NOT accurately drawn



(a) State the size of the angle vertically opposite the 105 degree angle. **(1)**

- ☐ A) 75
- ☐ B) 90
- ☐ C) 105
- ☐ D) 115
- ☐ E) 180

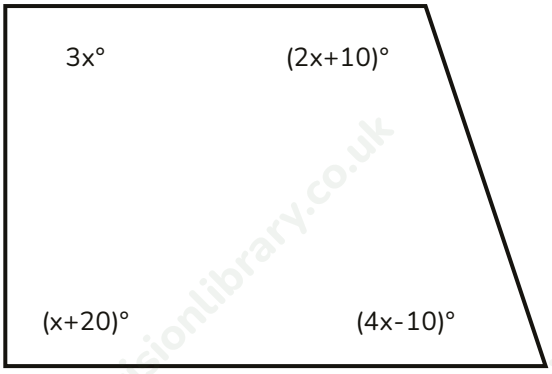
(b) Calculate the size of angle x, which is adjacent to the 105 degree angle on the same straight line. **(2)**

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4 A quadrilateral has four angles: 3x degrees, (2x + 10) degrees, (x + 20) degrees and (4x - 10) degrees.

Diagram NOT accurately drawn



(not to scale)

(a) Form an equation using the fact that the angles of a quadrilateral sum to 360 degrees, and solve it to find the value of x. **(3)**

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(b) Hence calculate the size of all four angles. **(2)**

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Mark scheme · 2.12-2 Angles and Shape: Practice Set 2: Test Pack

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

Question 1

(a) acute cao	**B1**
(a) Answer: acute	
(b) right angle cao	**B1**
(b) Answer: right angle	
(c) obtuse cao	**B1**
(c) Answer: obtuse	
(d) straight (line) cao	**B1**
(d) Answer: straight	
(e) reflex cao	**B1**
(e) Answer: reflex	

Question 2

(a) 360 / 8 seen	**M1**
(a) 45 degrees cao	**A1**
(a) Answer: 45 degrees	
(b) 180 - their (a) seen (ft)	**M1**
(b) 135 degrees cao (ft)	**A1**
(b) Answer: 135 degrees	

Question 3

(a) 105 degrees cao (vertically opposite angles are equal)	**B1**
(a) Answer: 105 degrees	
(b) 180 - 105 seen	**M1**
(b) 75 degrees cao	**A1**
(b) Answer: x = 75 degrees	

Question 4

(a) 3x + (2x + 10) + (x + 20) + (4x - 10) = 360 seen (oe)	**M1**
(a) 10x + 20 = 360 simplified (oe), leading to 10x = 340	**M1**
(a) x = 34 cao	**A1**
(a) Answer: x = 34	
(b) their x substituted into all four expressions (ft)	**M1**
(b) 102 degrees, 78 degrees, 54 degrees and 126 degrees all correct cao	**A1**
(b) Answer: 102 degrees, 78 degrees, 54 degrees and 126 degrees	

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