2.12-3 Angles and Shape: Practice Set 3: Test Pack

GL ASSESSMENT GL · Calculators not allowed · about 15 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 State the type of each angle.

(a) An angle of 47 degrees. **(1)**

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

(c) An angle of 124 degrees. **(1)**

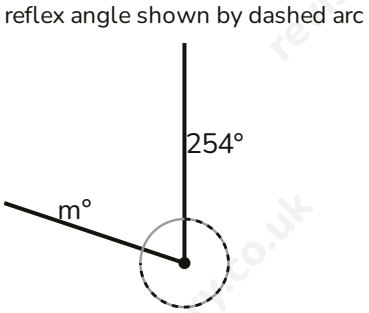
(d) An angle of 180 degrees. **(1)**

(e) An angle of 210 degrees. **(1)**

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2 At a point O, two angles are formed that together make a complete turn. One angle is 254 degrees (marked with a dashed reflex arc) and the other is m degrees. Calculate the value of m.

Diagram NOT accurately drawn



(not to scale)

(2)

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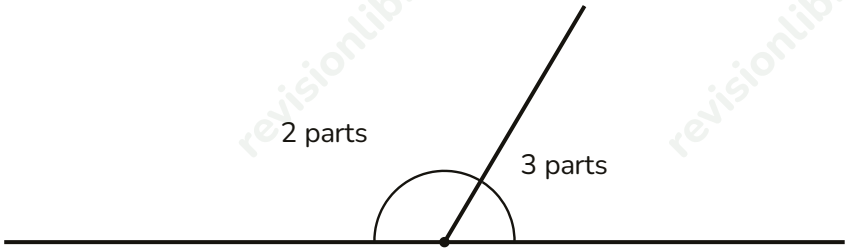
3 A 3D shape has one flat circular face, one curved face, one vertex and one edge. What is this shape?

- ☐ A) Cylinder
- ☐ B) Cone
- ☐ C) Sphere
- ☐ D) Square-based pyramid

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4 Two angles lie on a straight line, in the ratio 2 : 3. Calculate the size of each angle.

Diagram NOT accurately drawn



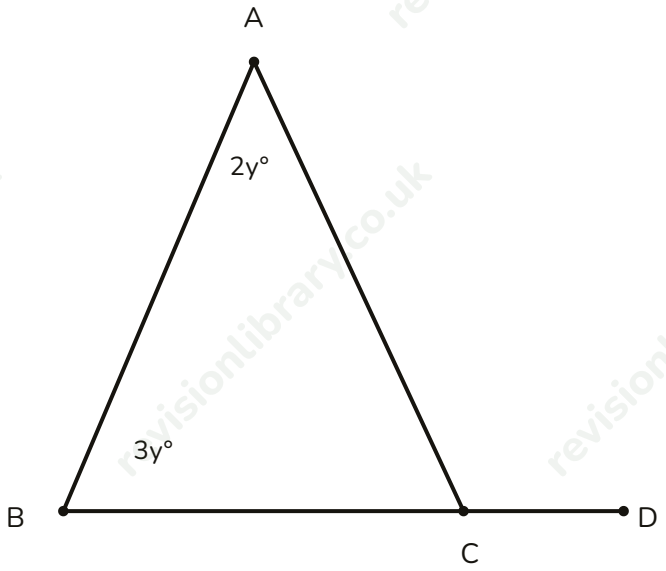
(not to scale)

(3)

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5 In triangle ABC, angle A = 2y degrees, angle B = 3y degrees and angle C = (5y - 10) degrees. Side BC is extended to a point D, so that angle ACD is the exterior angle of the triangle at C.

Diagram NOT accurately drawn



Not to scale

(a) Form an equation using the fact that the angles in a triangle sum to 180 degrees, and solve it to find the value of y. **(3)**

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

.....

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

360 - 254 seen (angles around a point sum to 360 degrees)	**M1**
106 degrees cao	**A1**
Answer: m = 106 degrees	

Question 3

B cao	**B1**
Answer: B) Cone	

Question 4

180 / 5 = 36 seen (dividing into 2 + 3 = 5 equal parts)	**M1**
72 degrees cao	**A1**
108 degrees cao	**A1**
Answer: 72 degrees and 108 degrees	

Question 5

(a) 2y + 3y + 5y - 10 = 180 seen	**M1**
(a) 10y - 10 = 180 seen	**M1**
(a) y = 19 cao	**A1**
(a) Answer: y = 19	
(b) angle A + angle B seen (ft), i.e. 2(19) + 3(19), or 180 - angle C	**M1**
(b) 95 degrees cao (ft)	**A1**
(b) Answer: 95 degrees	

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