8.4 Geometry: Shapes, Angles and Lines: 1-hour Pack

Calculators not allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 How many faces does a pentagonal-based pyramid have?

Answer: ___

(1)

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2 Angles on a straight line add up to 180 degrees. Two angles on a straight line are 86 degrees and 67 degrees. A third angle fills the rest of the line.

What is the third angle?

Answer: ___ degrees

(2)

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3 A right angle is split into two angles. One of them is 43 degrees.

What is the other?

Answer: ___ degrees

(1)

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4 An angle measures 126 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

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5 A right angle is split into two angles. One of them is 26 degrees.

What is the other?

Answer: ___ degrees

(1)

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6 A right angle is split into two angles. One of them is 19 degrees.

What is the other?

Answer: ___ degrees

(1)

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7 A right angle is split into two angles. One of them is 54 degrees.

What is the other?

Answer: ___ degrees

(1)

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8 Angles on a straight line add up to 180 degrees. One angle is 117 degrees.

What is the other angle?

Answer: ___ degrees

(1)

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9 A toy model is a square-based pyramid. How many faces, edges and vertices does a square-based pyramid have? Give each answer.

(a) Number of faces **(1)**

(b) Number of edges **(1)**

(c) Number of vertices **(1)**

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10 Angles on a straight line add up to 180 degrees. One angle is 146 degrees.

What is the other angle?

Answer: ___ degrees

(1)

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11 A rectangle is 29 m long and 10 m wide.

What is its perimeter?

Answer: ___ m

(2)

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12 How many edges does an octagonal-based pyramid have?

Answer: ___

(2)

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13 An angle measures 24 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

---

14 An angle measures 6 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

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15 A right angle is split into two angles. One of them is 61 degrees.

What is the other?

Answer: ___ degrees

(1)

---

16 An angle measures 172 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

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17 A rectangle is 13 cm long and 15 cm wide.

What is its perimeter?

Answer: ___ cm

(2)

---

18 An angle measures 59 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

---

19 Is a circle a polygon? Explain your answer. In your explanation say whether a circle has straight sides and how this compares to polygons.

(2)

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20 Drawn on a page are two lines that meet and form four angles. One of the angles is 90 degrees. How many of the angles are 90 degrees?

(1)

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21 Priya draws two lines that cross like a plus sign. Are these lines perpendicular and do they make right angles? Explain your answer.

(2)

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22 How many vertices does a prism with a triangular cross-section (3 sides) have?

Answer: ___

(2)

---

23 A small gift box is shaped like a cube. How many flat faces does the cube have?

(1)

---

24 A right angle is split into two angles. One of them is 44 degrees.

What is the other?

Answer: ___ degrees

(1)

---

25 Angles on a straight line add up to 180 degrees. One angle is 105 degrees.

What is the other angle?

Answer: ___ degrees

(1)

---

26 An angle measures 142 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

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27 A square has sides of length 59 cm.

What is its perimeter?

Answer: ___ cm

Diagram NOT accurately drawn



(1)

28 An angle measures 86 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

29 Angles on a straight line add up to 180 degrees. One angle is 122 degrees.

What is the other angle?

Answer: ___ degrees

(1)

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30 Angles on a straight line add up to 180 degrees. One angle is 94 degrees.

What is the other angle?

Answer: ___ degrees

(1)

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31 A triangular prism is shown in a toy set. How many vertices (corners) does a triangular prism have?

(1)

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32 An angle measures 93 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

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33 A square has sides of length 6 m.

What is its perimeter?

Answer: ___ m

Diagram NOT accurately drawn



(1)

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34 A square has sides of length 19 km.

What is its perimeter?

Answer: ___ km

Diagram NOT accurately drawn



19 km

(1)

35 Angles on a straight line add up to 180 degrees. One angle is 21 degrees.

What is the other angle?

Answer: ___ degrees

(1)

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36 A rectangle is 37 mm long and 16 mm wide.

What is its perimeter?

Answer: ___ mm

(2)

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37 I am a quadrilateral. I have 0 pairs of parallel sides and 1 line of symmetry.

What shape am I?

Answer: ___

(2)

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Mark scheme · 8.4 Geometry: Shapes, Angles and Lines: 1-hour Pack

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

Question 1

6 cao — **B1**

Answer: **6**

Question 2

153 seen — **M1**

27 degrees cao — **A1**

Answer: **27 degrees**

Question 3

47 degrees cao — **B1**

Answer: **47 degrees**

Question 4

obtuse cao — **B1**

Answer: **obtuse**

Question 5

64 degrees cao — **B1**

Answer: **64 degrees**

Question 6

71 degrees cao — **B1**

Answer: **71 degrees**

Question 7

36 degrees cao — **B1**

Answer: **36 degrees**

Question 8

63 degrees cao — **B1**

Answer: **63 degrees**

Question 9

(a) 5 cao — **B1**

(a) Answer: **5**

(b) 8 cao — **B1**

(b) Answer: **8**

(c) 5 cao — **B1**

(c) Answer: **5**

Question 10

34 degrees cao — **B1**

Answer: **34 degrees**

Question 11

adds all four sides or doubles l + w — **M1**

78 m cao — **A1**

Answer: **78 m**

Question 12

uses a rule or counts carefully — **M1**

16 cao — **A1**

Answer: **16**

Question 13

acute cao — **B1**

Answer: **acute**

Question 14

acute cao — **B1**

Answer: **acute**

Question 15

29 degrees cao — **B1**

Answer: **29 degrees**

Question 16

obtuse cao — **B1**

Answer: **obtuse**

Question 17

adds all four sides or doubles l + w — **M1**

56 cm cao — **A1**

Answer: **56 cm**

Question 18

acute cao — **B1**

Answer: **acute**

Question 19

Correct identification (No) cao — **B1**

Reason that a circle has no straight sides while polygons are made of straight sides oe — **B1**

Answer: **No; a circle has a curved edge and no straight sides, unlike polygons which have straight sides**

Question 20

4 cao — **B1**

Answer: **4**

Question 21

Yes identified cao — **B1**

Reason that they meet at right angles and make right angles oe — **B1**

Answer: **Yes; they meet at right angles and so form right angles**

Question 22

uses a rule or counts carefully — **M1**

6 cao — **A1**

Answer: **6**

Question 23

6 cao — **B1**

Answer: **6**

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Question 24

46 degrees cao **B1**

Answer: **46 degrees**

Question 25

75 degrees cao **B1**

Answer: **75 degrees**

Question 26

obtuse cao **B1**

Answer: **obtuse**

Question 27

236 cm cao **B1**

Answer: **236 cm**

Question 28

acute cao **B1**

Answer: **acute**

Question 29

58 degrees cao **B1**

Answer: **58 degrees**

Question 30

86 degrees cao **B1**

Answer: **86 degrees**

Question 31

6 cao **B1**

Answer: **6**

Question 32

obtuse cao **B1**

Answer: **obtuse**

Question 33

24 m cao **B1**

Answer: **24 m**

Question 34

76 km cao **B1**

Answer: **76 km**

Question 35

159 degrees cao **B1**

Answer: **159 degrees**

Question 36

adds all four sides or doubles l + w **M1**

106 mm cao **A1**

Answer: **106 mm**

Question 37

eliminates at least one shape **M1**

kite cao **A1**

Answer: **kite**

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