8.6 Geometry: Angles, Shapes and Reflection: 1-hour Pack

Calculators not allowed · about 60 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 An isosceles triangle has two equal angles of 33 degrees each.

What is the third angle?

Answer: ___ degrees

(2)

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2 Two angles in a triangle are 41 degrees and 75 degrees.

What is the third angle?

Answer: ___ degrees

(2)

---

3 A straight line is split by a point so that one angle on the line is 125 degrees. Write the sum of the two angles that share a straight line and give the size of the other angle.

(1)

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4 Four angles meet at a point and add up to 360 degrees. Three of the angles are 110, 111 and 94 degrees.

What is the fourth angle?

Answer: ___ degrees

(2)

---

5 A line joins (1, 5) and (9, 5).

What are the coordinates of the midpoint of the line?

Answer: (___, ___)

(2)

---

6 A shape has vertices A(4, 2), B(5, 5), C(5, 3). It is translated 2 units right and 2 units down.

Write the coordinates of the translated vertices in the same order.

Answer: ___

(2)

---

7 An angle measures 174 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

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8 An isosceles triangle has two equal angles of 55 degrees each.

What is the third angle?

Answer: ___ degrees

(2)

---

9 A line joins (1, 7) and (9, 7).

What are the coordinates of the midpoint of the line?

Answer: (___, ___)

(2)

---

10 A right angle is split into two angles. One of them is 14 degrees.

What is the other?

Answer: ___ degrees

(1)

---

11 Four angles meet at a point and add up to 360 degrees. Three of the angles are 69, 77 and 79 degrees.

What is the fourth angle?

Answer: ___ degrees

(2)

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12 A right angle is split into two angles. One of them is 34 degrees.

What is the other?

Answer: ___ degrees

(1)

---

13 Angles on a straight line add up to 180 degrees. Two angles on a straight line are 38 degrees and 56 degrees. A third angle fills the rest of the line.

What is the third angle?

Answer: ___ degrees

(2)

---

14 An angle measures 263 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

---

15 A shape has vertices A(5, 6), B(3, 1), C(2, 3). It is translated 3 units up.

Write the coordinates of the translated vertices in the same order.

Answer: ___

(2)

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16 Points C and D are at (4, 4) and (4, 9). Each grid square is 1 unit wide.

How far is C from D?

Answer: ___ units

(1)

---

17 An angle measures 111 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

---

18 A shape has vertices A(6, 0), B(1, 1), C(4, 2). It is translated 3 units right and 1 unit up.

Write the coordinates of the translated vertices in the same order.

Answer: ___

(2)

---

19 On a straight line, one angle is 35 degrees and the other is x degrees. Work out x.

(2)

---

20 An angle on a diagram is 125 degrees. What is the size of the angle needed to complete a full turn?

Answer: ___ degrees

(1)

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21 Points C and D are at (1, 5) and (1, 9). Each grid square is 1 unit wide.

How far is C from D?

Answer: ___ units

(1)

---

22 A shape has vertices A(0, 4), B(0, 2), C(4, 2), D(6, 5). It is translated 4 units right and 1 unit down.

Write the coordinates of the translated vertices in the same order.

Answer: ___

(2)

---

23 Point P is at (2, 7). It moves 1 unit right and 3 units down.

What are the coordinates of the new point?

Answer: (___, ___)

(2)

---

24 An angle measures 273 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

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25 Four angles meet at a point and add up to 360 degrees. Three of the angles are 64, 61 and 44 degrees.

What is the fourth angle?

Answer: ___ degrees

(2)

---

26 An angle measures 341 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

---

27 Point A is at (5, 8). It is translated by the vector (0, 1), where the first number is the move to the right and the second is the move up.

What are the coordinates of the image of A?

Answer: (___, ___)

(2)

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28 A shape has vertices A(0, 6), B(5, 2), C(1, 1), D(6, 4). It is translated 1 unit right and 3 units up.

Write the coordinates of the translated vertices in the same order.

Answer: ___

(2)

---

29 An isosceles triangle has an angle of 106 degrees between its two equal sides.

What size is each of the other two angles?

Answer: ___ degrees

(2)

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Mark scheme · 8.6 Geometry: Angles, Shapes and Reflection: 1-hour Pack

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

Question 1

66 seen — M1
114 degrees cao — A1
Answer: **114 degrees**

Question 2

116 seen — M1
64 degrees cao — A1
Answer: **64 degrees**

Question 3

180 degrees and 55 degrees cao — B1
Answer: **180 degrees; other angle 55 degrees**

Question 4

315 seen — M1
45 degrees cao — A1
Answer: **45 degrees**

Question 5

halves the horizontal distance — M1
(5, 5) cao — A1
Answer: **(5, 5)**

Question 6

two vertices correct — M1
(6, 0), (7, 3), (7, 1) cao — A1
Answer: **(6, 0), (7, 3), (7, 1)**

Question 7

obtuse cao — B1
Answer: **obtuse**

Question 8

110 seen — M1
70 degrees cao — A1
Answer: **70 degrees**

Question 9

halves the horizontal distance — M1
(5, 7) cao — A1
Answer: **(5, 7)**

Question 10

76 degrees cao — B1
Answer: **76 degrees**

Question 11

225 seen — M1
135 degrees cao — A1
Answer: **135 degrees**

Question 12

56 degrees cao — B1
Answer: **56 degrees**

Question 13

94 seen — M1
86 degrees cao — A1
Answer: **86 degrees**

Question 14

reflex cao — B1
Answer: **reflex**

Question 15

two vertices correct — M1
(5, 9), (3, 4), (2, 6) cao — A1
Answer: **(5, 9), (3, 4), (2, 6)**

Question 16

5 units cao — B1
Answer: **5 units**

Question 17

obtuse cao — B1
Answer: **obtuse**

Question 18

two vertices correct — M1
(9, 1), (4, 2), (7, 3) cao — A1
Answer: **(9, 1), (4, 2), (7, 3)**

Question 19

Uses 35 + x = 180 or describes correct equation — M1
145 degrees cao — B1
Answer: **145 degrees**

Question 20

235 degrees cao — B1
Answer: **235 degrees**

Question 21

4 units cao — B1
Answer: **4 units**

Question 22

two vertices correct — M1
(4, 3), (4, 1), (8, 1), (10, 4) cao — A1
Answer: **(4, 3), (4, 1), (8, 1), (10, 4)**

Question 23

one coordinate correct — M1
(3, 4) cao — A1
Answer: **(3, 4)**

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Question 24

reflex cao	**B1**

Answer: **reflex**

Question 25

169 seen	**M1**
191 degrees cao	**A1**

Answer: **191 degrees**

Question 26

reflex cao	**B1**

Answer: **reflex**

Question 27

adds the vector	**M1**
(5, 9) cao	**A1**

Answer: **(5, 9)**

Question 28

two vertices correct	**M1**
(1, 9), (6, 5), (2, 4), (7, 7) cao	**A1**

Answer: **(1, 9), (6, 5), (2, 4), (7, 7)**

Question 29

74 seen	**M1**
37 degrees cao	**A1**

Answer: **37 degrees**

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