8.6 Geometry: Angles, Shapes and Reflection: 30-minute Pack

Calculators not allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Three corners of a rectangle are (4, 6), (6, 6) and (6, 9). The sides are parallel to the axes.

What are the coordinates of the fourth corner?

Answer: (___, ___)

(1)

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2 Point P is at (1, 6). It moves 5 units right and 1 unit up.

What are the coordinates of the new point?

Answer: (___, ___)

(2)

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

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

Answer: ___

(2)

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4 Three angles in a quadrilateral are 123, 97 and 64 degrees.

What is the fourth angle?

Answer: ___ degrees

(2)

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5 Angles on a straight line add up to 180 degrees. Two angles on a straight line are 148 degrees and 13 degrees. A third angle fills the rest of the line.

What is the third angle?

Answer: ___ degrees

(2)

---

6 An angle measures 132 degrees. Is it acute, obtuse or reflex?

Answer: ___

(1)

---

7 A right angle is split into two angles. One of them is 42 degrees.

What is the other?

Answer: ___ degrees

(1)

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8 Three angles in a quadrilateral are 114, 72 and 79 degrees.

What is the fourth angle?

Answer: ___ degrees

(2)

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

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

Answer: ___

(2)

---

10 A shape has vertices A(2, 5), B(3, 3), C(1, 5). It is translated 2 units right and 1 unit up.

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

Answer: ___

(2)

---

11 Two angles in a triangle are 43 degrees and 67 degrees.

What is the third angle?

Answer: ___ degrees

(2)

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12 At a point three angles meet. Two of the angles are 110 degrees and 95 degrees. Calculate the size of the third angle y.

(2)

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13 An isosceles triangle has an angle of 72 degrees between its two equal sides.

What size is each of the other two angles?

Answer: ___ degrees

(2)

---

14 Point B is at (8, 4). It is reflected in the mirror line x = 5.

What are the coordinates of the image of B?

Answer: (___, ___)

(2)

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Mark scheme · 8.6 Geometry: Angles, Shapes and Reflection: 30-minute Pack

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

Question 1

(4, 9) cao	**B1**

Answer: **(4, 9)**

Question 2

one coordinate correct	**M1**
(6, 7) cao	**A1**

Answer: **(6, 7)**

Question 3

two vertices correct	**M1**
(8, 5), (7, 5), (2, 5) cao	**A1**

Answer: **(8, 5), (7, 5), (2, 5)**

Question 4

284 seen	**M1**
76 degrees cao	**A1**

Answer: **76 degrees**

Question 5

161 seen	**M1**
19 degrees cao	**A1**

Answer: **19 degrees**

Question 6

obtuse cao	**B1**

Answer: **obtuse**

Question 7

48 degrees cao	**B1**

Answer: **48 degrees**

Question 8

265 seen	**M1**
95 degrees cao	**A1**

Answer: **95 degrees**

Question 9

two vertices correct	**M1**
(7, 7), (1, 1), (7, 3), (7, 4) cao	**A1**

Answer: **(7, 7), (1, 1), (7, 3), (7, 4)**

Question 10

two vertices correct	**M1**
(4, 6), (5, 4), (3, 6) cao	**A1**

Answer: **(4, 6), (5, 4), (3, 6)**

Question 11

110 seen	**M1**
70 degrees cao	**A1**

Answer: **70 degrees**

Question 12

Uses 110 + 95 + y = 360 or equivalent	**M1**
155 degrees cao	**B1**

Answer: **155 degrees**

Question 13

108 seen	**M1**
54 degrees cao	**A1**

Answer: **54 degrees**

Question 14

same distance from the mirror line	**M1**
(2, 4) cao	**A1**

Answer: **(2, 4)**

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