



KS2.M-Y3G1 Geometry: Shapes, Angles and Lines

Calculators not allowed · about 40 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** A shape has four equal sides and four right angles. What is the name of this shape?

(1)

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

(1)

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

(1)

- 4** How many lines of symmetry does an equilateral triangle have?

(1)

- 5** Is a rectangle a regular polygon? Explain your answer.

(2)

- 6** An angle measures 90 degrees. Is this a right angle? Tick the correct answer: Yes or No.

- ☐ Yes
☐ No

7 On a sheet of paper the top edge is horizontal. Is the left edge horizontal or vertical?

☐ horizontal

☐ vertical

8 Line A and line B are shown on a ruler. They never meet, and the distance between them stays the same along their length. Are the lines parallel? Explain your answer.

(2)

9 Two lines meet and make a right angle. Are these lines perpendicular? Write Yes or No.

☐ Yes

☐ No

10 How many edges does a cuboid (rectangular prism) have?

(1)

11 A child draws a shape with five straight sides. What is the name of this 2D shape?

(1)

12 Which of these shapes always has right angles: square or rhombus? Explain your answer.

(2)

13 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)

14 A shape has six equal square faces and looks like a dice. What 3D shape is this? Explain why each face is the same shape.

(2)

15 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)

16 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)

17 A rectangle measures 6 cm by 3 cm. How many right angles are inside the rectangle altogether? Give a reason.

(2)

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

(2)

Mark scheme · KS2.M-Y3G1 Geometry: Shapes, Angles and Lines

Question 1

- **B1** square cao
- Answer: **square**

Question 2

- **B1** 6 cao
- Answer: **6**

Question 3

- **B1** 6 cao
- Answer: **6**

Question 4

- **B1** 3 cao
- Answer: **3**

Question 5

- **B1** Correct identification (No) cao
- **B1** Reason that a rectangle does not have all sides equal oe
- Answer: **No; a rectangle can have opposite sides equal but not all four sides equal**

Question 6

- **B1** Yes cao
- Answer: **Yes**

Question 7

- **B1** vertical cao
- Answer: **vertical**

Question 8

- **B1** Correct identification (Yes) cao
- **B1** Reason that they never meet and remain the same distance apart oe
- Answer: **Yes; they never meet and stay the same distance apart**

Question 9

- **B1** Yes cao
- Answer: **Yes**

Question 10

- **B1** 12 cao
- Answer: **12**

Question 11

- **B1** pentagon cao
- Answer: **pentagon**

Question 12

- **B1** Square identified cao
- **B1** Reason that a square has four right angles while a rhombus may not have right angles oe
- Answer: **Square; because a square has four right angles but a rhombus does not have to**

Question 13

- (a) **B1** 5 cao
- (a) Answer: **5**
- (b) **B1** 8 cao
- (b) Answer: **8**
- (c) **B1** 5 cao
- (c) Answer: **5**

Question 14

- **B1** Cube identified cao
- **B1** Reason that each face is a square and all faces are equal in size oe
- Answer: **Cube; all faces are squares and equal in size**

Question 15

- **B1** Correct identification (No) cao
- **B1** Reason that a circle has no straight sides while polygons are made of straight sides oe
- Answer: **No; a circle has a curved edge and no straight sides, unlike polygons which have straight sides**

Question 16

- **B1** 4 cao
- Answer: **4**

Question 17

- **B1** 4 identified cao
- **B1** Reason that each corner is a right angle oe
- Answer: **4; each of the four corners is a right angle**

Question 18

- **B1** Yes identified cao
- **B1** Reason that they meet at right angles and make right angles oe
- Answer: **Yes; they meet at right angles and so form right angles**