6.2 Shape, Position and Direction: Test Pack

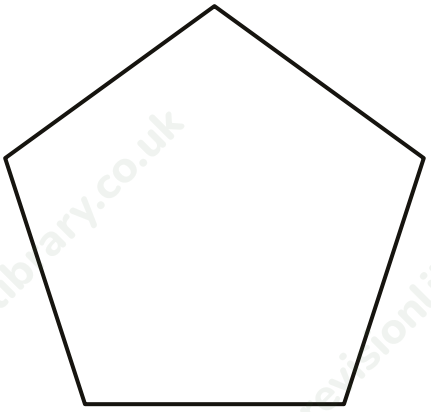
STA NC-KS1-MATHS-STA · Calculators not allowed · about 60 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Look at the shape below.

Write the name of the shape.





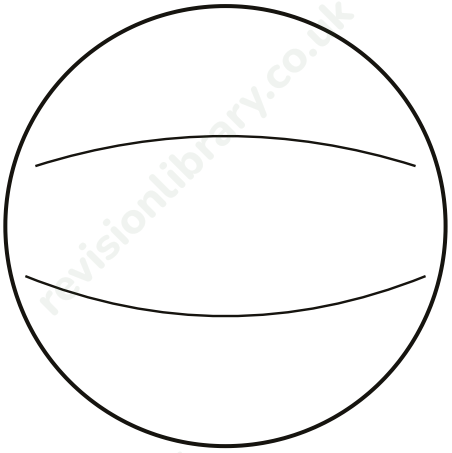
(1)

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2 Practice question (not marked). Look at the shape below.

Is this a 2D (flat) shape or a 3D (solid) shape?

Answer: 3D (solid) shape (this has been done for you)

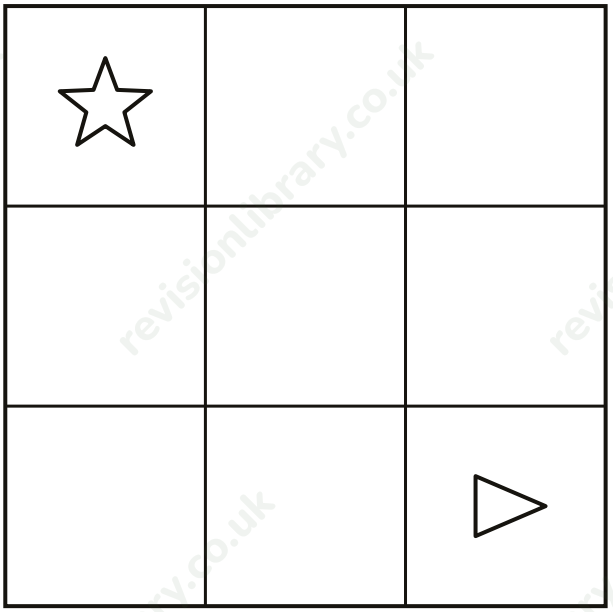




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3 Look at the grid below. It is made up of 9 equal squares in 3 rows and 3 columns.

A star is in the top-left square. A dark arrow marker is in the bottom-right square.

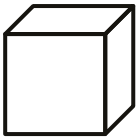


(a) How many squares down do you move to get from the star to the arrow marker? **(1)**

(b) How many squares to the right do you move to get from the star to the arrow marker? **(1)**

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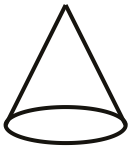
4 Priya builds a model using 3-D shapes: 2 cubes, 1 cuboid and 3 cones, as shown below.



2 cubes



1 cuboid



3 cones

(a) A cube has 6 flat faces. How many faces do the 2 cubes have altogether? **(1)**

(b) A cone has 2 faces in total (1 flat circular face and 1 curved face). How many faces do the 3 cones have altogether? **(1)**

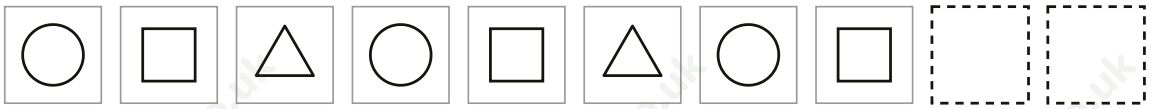
(c) The cuboid has 6 faces. Work out the total number of faces in Priya's whole model. Show your working. **(2)**

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5 Look at this pattern of shapes:

circle, square, triangle, circle, square, triangle, circle, square, ___, ___

Draw the next two shapes in the pattern in the two empty boxes.



(2)

---

6 Stepping stones are numbered 1 to 20. A rabbit stands on stone 4. It hops forward 6 stones, then back 2 stones.

Which stone is the rabbit on now?

(2)

---

7 I am a flat shape. It has 4 straight sides that are all the same length and 4 square corners.

What shape am I?

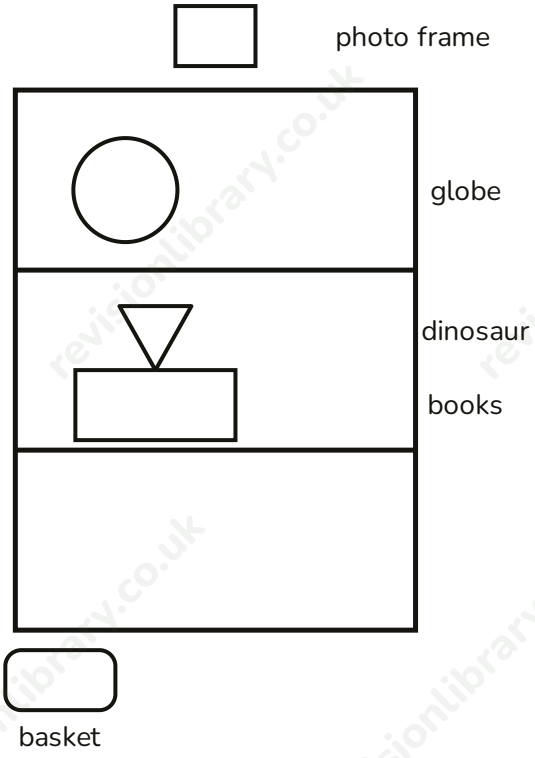
(1)

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8 Look at the picture of the bookshelf below.

Complete each sentence using a word or phrase from the box.

Word box: above, next to, on top of, under



(a) The globe is ___ the middle shelf. **(1)**

(b) The dinosaur is ___ the books. **(1)**

(c) The basket is ___ the bookcase. **(1)**

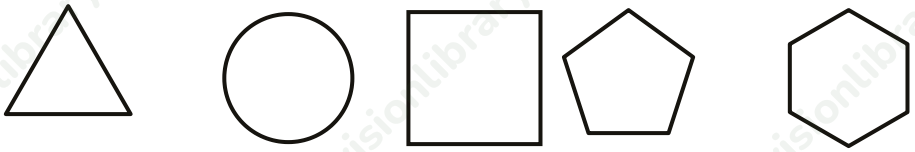
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9 Is a triangle drawn on paper a 2D shape or a 3D shape?

(1)

---

10 Five shapes are lined up in a row, as shown below: triangle, circle, square, pentagon, hexagon.



(a) Which shape is immediately to the right of the circle? **(1)**

(b) Which shape is second from the left? **(1)**

---

11 Four toy animals sit in a row from left to right: rabbit, duck, cat, dog.

Which toy is on the far left?

(1)

---

12 Four toy animals sit in a row from left to right: rabbit, cat, fish, pig.

Which toy is on the far right?

(1)

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13 Jade is facing south. Jade makes a quarter turn anticlockwise.

Which direction is Jade facing now?

(1)

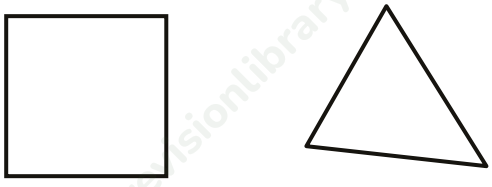
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14 How many edges does a triangular prism have?

(1)

---

15 Four shapes are shown below, labelled A, B, C and D: a square, a scalene triangle (a triangle with three different side lengths), the letter T and the letter R.



A

B



C



D

(a) Tick the letters of the shapes that have at least one line of symmetry. **(2)**

(b) Explain why shape B (the scalene triangle) has no line of symmetry. **(1)**

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16 6 children stand in a line, from the front: Victor, Uma, Zara, Ben, Jack, George.

Who is first in the line?

(1)

---

17 Look at the pattern. What comes next?

red, blue, red, blue, red, ___

(1)

---

18 A robot stands on a square grid at column 1, row 0 (columns go across, rows go up). It moves 3 squares up, then 3 squares down.

Which column and row is the robot on now? Write column then row.

(2)

---

19 How many corners does a octagon have?

(1)

---

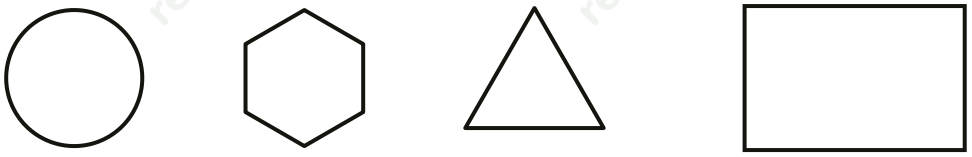
20 Look at the pattern. What comes next?

star, heart, star, heart, star, ___

(1)

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21 Look at the four shapes below: a circle, a hexagon, a triangle and a rectangle.



(a) Tick the shape(s) that have at least one curved side. **(1)**

(b) Which of the four shapes has the most straight sides? **(1)**

(c) Work out the total number of straight sides in all four shapes added together. Show your working. **(2)**

---

22 Stepping stones are numbered 1 to 20. A kangaroo stands on stone 9. It hops forward 6 stones, then back 5 stones.

Which stone is the kangaroo on now?

(2)

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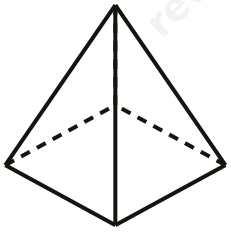
23 Here are some flat shapes: circle, pentagon, circle, rectangle, octagon, triangle.

How many of the shapes has fewer than 5 corners?

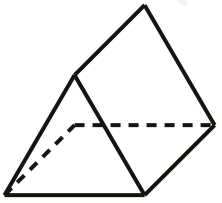
(1)

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24 Look at the 3-D shapes below: a square-based pyramid (a) and a triangular prism (b).



(a)



(b)

(a) How many flat faces does a triangular prism have? **(1)**

(b) How many vertices (corners) does a square-based pyramid have? **(1)**

---

25 4 children stand in a line, from the front: Oscar, Uma, Mateo, Lily.

Who is first in the line?

(1)

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26 5 children stand in a line, from the front: Quinn, Victor, Ivan, Sofia, Femi.

What position is Victor in the line? Write your answer as first, second, third and so on.

(1)

27 Four toy animals sit in a row from left to right: bird, cat, cow, rabbit.

Which toy is between the cat and the rabbit?

(1)

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Mark scheme · 6.2 Shape, Position and Direction: Test Pack

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

Question 1

pentagon cao — **B1**

Answer: **pentagon**

Question 2

Practice item; not included in total marks. Correct answer is 3D (solid) shape. — **B0**

Answer: **3D (solid) shape**

Question 3

(a) 2 cao oe (accept '2 squares down') — **B1**

(a) Answer: **2**

(b) 2 cao oe (accept '2 squares right') — **B1**

(b) Answer: **2**

Question 4

(a) 12 cao — **B1**

(a) Answer: **12**

(b) 6 cao — **B1**

(b) Answer: **6**

(c) adds their 2 cubes' total, the 3 cones' total and the cuboid's 6 faces: 12 + 6 + 6 oe, or equivalent correct method, ft their (a) and (b) — **M1**

(c) 24 cao, ft their 12 + 6 + 6 — **A1**

(c) Answer: **24**

Question 5

triangle drawn in the first empty box cao — **B1**

circle drawn in the second empty box cao — **B1**

Answer: **triangle, circle**

Question 6

4 + 6 = 10 seen — **M1**

8 cao — **A1**

Answer: **8**

Question 7

square cao — **B1**

Answer: **square**

Question 8

(a) above cao oe — **B1**

(a) Answer: **above**

(b) on top of cao oe — **B1**

(b) Answer: **on top of**

(c) under cao oe (accept 'below') — **B1**

(c) Answer: **under**

Question 9

2D cao — **B1**

Answer: **2D**

Question 10

(a) square cao — **B1**

(a) Answer: **square**

(b) circle cao — **B1**

(b) Answer: **circle**

Question 11

rabbit cao — **B1**

Answer: **rabbit**

Question 12

pig cao — **B1**

Answer: **pig**

Question 13

east cao — **B1**

Answer: **east**

Question 14

9 cao — **B1**

Answer: **9**

Question 15

(a) A ticked cao — **B1**

(a) C ticked cao (lose 1 mark from this part for each of B or D incorrectly ticked) — **B1**

(a) Answer: **A and C**

(b) correct reason given oe, e.g. its three sides (and angles) are all different lengths/sizes, so folding it would never make the two halves match — **B1**

(b) Answer: **Its three sides are all different lengths, so there is no line where folding it would make the two halves match exactly.**

Question 16

Victor cao — **B1**

Answer: **Victor**

Question 17

blue cao — **B1**

Answer: **blue**

Question 18

one move tracked correctly — **M1**

column 1, row 0 cao — **A1**

Answer: **column 1, row 0**

Question 19

8 cao — **B1**

Answer: **8**

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Question 20

heart cao **B1**

Answer: **heart**

Question 21

(a) circle ticked, and no other shape ticked, cao **B1**

(a) Answer: **circle**

(b) hexagon cao **B1**

(b) Answer: **hexagon**

(c) adds the number of straight sides in each shape: 0 (circle) + 6 (hexagon) + 3 (triangle) + 4 (rectangle) oe, or equivalent correct method **M1**

(c) 13 cao **A1**

(c) Answer: **13**

Question 22

9 + 6 = 15 seen **M1**

10 cao **A1**

Answer: **10**

Question 23

4 cao **B1**

Answer: **4**

Question 24

(a) 5 cao **B1**

(a) Answer: **5**

(b) 5 cao **B1**

(b) Answer: **5**

Question 25

Oscar cao **B1**

Answer: **Oscar**

Question 26

second cao **B1**

Answer: **second**

Question 27

cow cao **B1**

Answer: **cow**

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