3. A solid shape has 5 faces, 6 vertices and 9 edges.

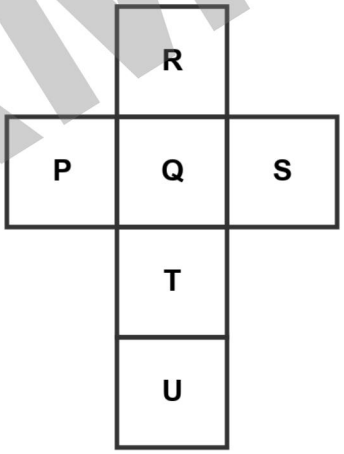
Which 3D shape is being described?

A. cube
B. triangular prism
C. pentagonal prism
D. square-based pyramid
E. triangle-based pyramid

4. **How many pairs of parallel sides does a regular hexagon have?**

A. 2 **B.** 4 **C.** 3 **D.** 6 **E.** 8

5. The diagram below shows the net of a cube. The six faces are labelled P, Q, R, S, T and U.



When the net is folded to make the cube, which face is opposite face Q?

A. Face P **B.** Face R **C.** Face S **D.** Face T **E.** Face U

SAMPLE

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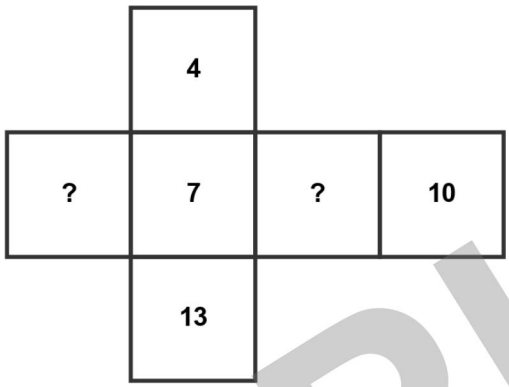
Geometry

Pack 1: Challenge

10 Questions

1. The net below folds up to make a cube. When the cube is built, the two numbers on each pair of opposite faces add up to the same total. Two of the numbers are missing.



What is the average of all of the numbers on the net?

A. 7 **B.** 9 **C.** 8.5 **D.** 7.5 **E.** 8

2. [illegible]

SAMPLE

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Geometry: Answer Guide

Pack 1: Mini-Test 1

1. [illegible]

2. [illegible]

3. **B**, triangular prism
   Step 1: A triangular prism has 2 triangular faces and 3 rectangular faces, giving a total of 2 + 3 = 5 faces. There are 6 vertices, 3 on each triangular face. Finally, there are 3 edges on each triangular face and 3 additional edges connecting the vertices of the opposite triangles, making a total of 3 × 2 + 3 = 6 + 3 = 9 edges.

4. **C**, 3
   Step 1: A regular hexagon has 6 sides, and opposite sides are parallel.
   Pairing each side with the one directly opposite it gives 6 ÷ 2 = 3 pairs.

5. **E**, Face U
   Step 1: On a cube net, opposite faces are the ones separated by exactly one face in a straight line.
   Step 2: Reading down the upright column R, Q, T, U: Q and T are next to each other (adjacent), and Q and U have exactly one face (T) between them, so Q and U are opposite.
   Step 3: As a check, P and S are opposite (one face, Q, between them) and R is opposite T. So, the face opposite Q is U.

6. [illegible]

7. [illegible]

8. [illegible]

SAMPLE

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GEOMETRY MINI TEST 1: MATHS ANSWER SHEET

Please mark boxes with a thin horizontal line like this ▬.

1

- 63 cm ☐
- 81 cm ☐
- 72 cm ☐
- 54 cm ☐
- 90 cm ☐

2

- HOH ☐
- SIS ☐
- BIB ☐
- VAN ☐
- PIP ☐

3

- cube ☐
- triangular prism ☐
- pentagonal prism ☐
- square-based pyramid ☐
- triangle-based pyramid ☐

4

- 2 ☐
- 4 ☐
- 3 ☐
- 6 ☐
- 8 ☐

5

- Face P ☐
- Face R ☐
- Face S ☐
- Face T ☐
- Face U ☐

6

- 160 cm^2 ☐
- 92 cm^2 ☐
- 200 cm^2 ☐
- 184 cm^2 ☐
- 320 cm^2 ☐

7

- 8 cm ☐
- 6 cm ☐
- 7 cm ☐
- 9 cm ☐
- 12 cm ☐

SAMPLE

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