THE STRIVING

MUSLIM ACADEMY

Islamic and Academic Education

STAGE 2 · MATHEMATICS · PRACTICE PACK

Geometry properties of shapes

Year 2 of the national curriculum. Every question is worked through at the back, step by step, not just answered.

WHAT IS INSIDE

- Sides and vertices
- Faces, edges and vertices
- Flat shapes on solid shapes
- A line of symmetry down the middle
- How each one is worked

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4 sets · a hint on every question

Written for a parent teaching at home. No training assumed, and nothing else to buy.

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Sides and vertices

These get harder as you go down, so do them in order.



1. **How many sides and how many vertices does a triangle have?**
   The name tells you: a triangle has 3 of each.

2. **How many sides and how many vertices does a square have?**
   A square is a four-sided shape, and corners come in the same number.

3. **How many sides and how many vertices does a rectangle have?**
   A rectangle is a four-sided shape, and corners come in the same number.

4. **How many sides and how many vertices does a pentagon have?**
   The name tells you: a pentagon has 5 of each.

5. **How many sides and how many vertices does a hexagon have?**
   The name tells you: a hexagon has 6 of each.

6. **How many sides and how many vertices does a heptagon have?**
   The name tells you: a heptagon has 7 of each.

7. **How many sides and how many vertices does a octagon have?**
   The name tells you: a octagon has 8 of each.

8. **How many sides and how many vertices does a decagon have?**
   The name tells you: a decagon has 10 of each.

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Quick check

One right answer each. Ring the letter. These are for seeing what has stuck, so try them without writing any working down.



1. **How many sides and how many vertices does a hexagon have?**
   (A) 5 sides and 5 vertices (B) 10 sides and 10 vertices (C) 8 sides and 8 vertices (D) 6 sides and 6 vertices

2. **How many faces, edges and vertices does a triangular-based pyramid have?**
   (A) 6 faces, 12 edges, 8 vertices (B) 4 faces, 6 edges, 4 vertices (C) 8 faces, 18 edges, 12 vertices (D) 5 faces, 9 edges, 6 vertices

3. **On a triangular prism, what flat shape is the two ends?**
   (A) hexagon (B) circle (C) rectangle (D) triangle

4. **How many sides and how many vertices does a octagon have?**
   (A) 10 sides and 10 vertices (B) 7 sides and 7 vertices (C) 5 sides and 5 vertices (D) 8 sides and 8 vertices

5. **How many faces, edges and vertices does a square-based pyramid have?**
   (A) 6 faces, 12 edges, 8 vertices (B) 8 faces, 18 edges, 12 vertices (C) 7 faces, 15 edges, 10 vertices (D) 5 faces, 8 edges, 5 vertices

6. **On a cylinder, what flat shape is the two flat faces?**
   (A) circle (B) triangle (C) square (D) hexagon

7. **How many sides and how many vertices does a pentagon have?**
   (A) 3 sides and 3 vertices (B) 4 sides and 4 vertices (C) 5 sides and 5 vertices (D) 7 sides and 7 vertices

8. **How many faces, edges and vertices does a pentagonal prism have?**
   (A) 8 faces, 18 edges, 12 vertices (B) 7 faces, 12 edges, 7 vertices (C) 7 faces, 15 edges, 10 vertices (D) 5 faces, 9 edges, 6 vertices

9. **On a cone, what flat shape is the flat face?**
   (A) hexagon (B) triangle (C) square (D) circle

10. **How many sides and how many vertices does a rectangle have?**
    (A) 7 sides and 7 vertices (B) 4 sides and 4 vertices (C) 10 sides and 10 vertices (D) 3 sides and 3 vertices

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How each one is worked

Every answer here was calculated, not typed. If you find one that is wrong, tell us and we will correct the pack and send it to everybody who has it.



SIDES AND VERTICES

1. How many sides and how many vertices does a triangle have?

1. Count the straight sides of a triangle: 3.
2. Every corner where two sides meet is a vertex.
3. A triangle has 3 sides and 3 vertices.

Answer: **3 sides and 3 vertices**

2. How many sides and how many vertices does a square have?

1. Count the straight sides of a square: 4.
2. Every corner where two sides meet is a vertex.
3. A square has 4 sides and 4 vertices.

Answer: **4 sides and 4 vertices**

3. How many sides and how many vertices does a rectangle have?

1. Count the straight sides of a rectangle: 4.
2. Every corner where two sides meet is a vertex.
3. A rectangle has 4 sides and 4 vertices.

Answer: **4 sides and 4 vertices**

4. How many sides and how many vertices does a pentagon have?

1. Count the straight sides of a pentagon: 5.
2. Every corner where two sides meet is a vertex.
3. A pentagon has 5 sides and 5 vertices.

Answer: **5 sides and 5 vertices**

5. How many sides and how many vertices does a hexagon have?

1. Count the straight sides of a hexagon: 6.
2. Every corner where two sides meet is a vertex.
3. A hexagon has 6 sides and 6 vertices.

Answer: **6 sides and 6 vertices**

6. How many sides and how many vertices does a heptagon have?

1. Count the straight sides of a heptagon: 7.
2. Every corner where two sides meet is a vertex.
3. A heptagon has 7 sides and 7 vertices.

Answer: **7 sides and 7 vertices**

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SAMPLE PAGES

You have read a few pages. The pack is longer.

What you are holding is a short sample, taken from different parts of the pack so that you can see how a week is planned and what a child is actually asked to do, before you decide.

The complete pack, and the rest of the academic materials, are on our website: schemes of work for a parent teaching at home, and practice packs for the skills children get stuck on.

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Members of the homeschool community do not buy these. If you have joined the community, the pack for the term you are working on is given to you at no cost.

Our Islamic Education classes are free. These packs are part of what pays the teachers who teach them.