Year 5 · Geometry: Nets

Name: _____ Date: _____

Kia ora! A net is a flat shape that folds up into a 3D shape. Count the faces and picture the folds. Paper and scissors will help with the last questions.

Warm-up

1. How many faces does a cube have?

2. What shape is each face of a cube?

3. How many faces does a square pyramid have?

4. How many faces does a triangular prism have?

Practice

5. A net is made of 6 rectangles. Which 3D shape does it make?

6. A net is made of 1 square and 4 triangles. Which 3D shape does it make?

7. A net is made of 2 triangles and 3 rectangles. Which 3D shape does it make?

8. A net is made of 2 circles and 1 rectangle. Which 3D shape does it make?

9. How many edges and how many corners does a cube have?

10. A box is 2 cm by 3 cm by 4 cm. List the rectangles you need for its net.

Challenge

11. Six squares sit in one straight row. Can they fold into a cube? Explain.

12. Four squares sit in a row, with one more above the second square and one more below it. Can this fold into a cube? Try it with paper.

Answer key (for parents and tutors)

1. How many faces does a cube have?
   6 faces.
2. What shape is each face of a cube?
   A square.
3. How many faces does a square pyramid have?
   5 faces: 1 square and 4 triangles.
4. How many faces does a triangular prism have?
   5 faces: 2 triangles and 3 rectangles.
5. A net is made of 6 rectangles. Which 3D shape does it make?
   A cuboid.
6. A net is made of 1 square and 4 triangles. Which 3D shape does it make?
   A square pyramid.
7. A net is made of 2 triangles and 3 rectangles. Which 3D shape does it make?
   A triangular prism.
8. A net is made of 2 circles and 1 rectangle. Which 3D shape does it make?
   A cylinder.
9. How many edges and how many corners does a cube have?
   12 edges and 8 corners.
10. A box is 2 cm by 3 cm by 4 cm. List the rectangles you need for its net.
    2 rectangles of 2 cm by 3 cm, 2 of 2 cm by 4 cm, and 2 of 3 cm by 4 cm. That is 6 rectangles.
11. Six squares sit in one straight row. Can they fold into a cube? Explain.
    No. Wrapping the row round, the first and fifth squares land on the same face, so the top and bottom stay open.
12. Four squares sit in a row, with one more above the second square and one more below it. Can this fold into a cube? Try it with paper.
    Yes. The row wraps round four sides, and the other two squares become the top and bottom.