Drawing nets of 3D shapes

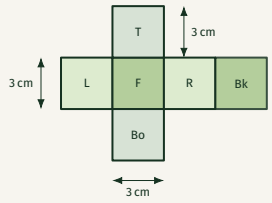
Recognize and draw nets to understand how 2D nets fold into 3D shapes.

Name _____ **Date** _____

Choose your approach

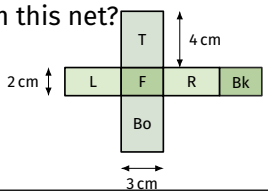
For each question, either draw the correct net, identify which net matches the shape, or describe the relationship between the net and the 3D shape. Show all working where needed.

Worked example Which 3D shape matches this net?



Six equal squares in a cross shape fold into a cube – each square becomes one face.

1. What 3D shape can be folded from this net?



2. How many faces does a cube have?

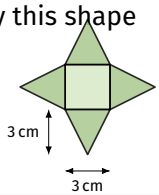
3. Count the squares in the cube net shown in the worked example.

4. Draw a net for a cube with side length 2 cm. (Draw your answer below)

5. What is the difference between a cube net and a cuboid net?

6. A cuboid has dimensions 5 cm × 3 cm × 2 cm. List the dimensions of each rectangular face in its net.

7. Identify this shape



8. How many triangular faces does a square pyramid have?

9. Can a cube net have all six squares in a straight line?

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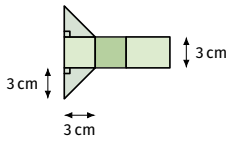
10. Draw a net for a rectangular prism (cuboid) with base 4 cm × 4 cm and height 2 cm.

11. List the three 3D shapes shown in the questions above.

12. What property do all nets of the same shape share?

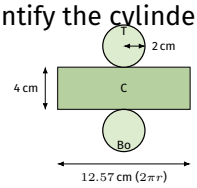
13. Identify this triangular prism net



14. How many rectangular faces does a triangular prism have?

15. Draw a net for this triangular prism

16. Identify the cylinder net



17. What shapes make up a cylinder net?

18. If a cylinder has radius 2 cm and height 5 cm, what is the width of the rectangle in its net?

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19. How many faces, edges, and vertices does a cube have? Write: F = ____, E = ____, V = ____

20. How many faces, edges, and vertices does a triangular prism have? Write: F = ____, E = ____, V = ____

21. How many faces, edges, and vertices does a square pyramid have? Write: F = ____, E = ____, V = ____

22. Draw another valid net for a cube (different from the one in question 4)

23. Explain why these two nets both fold into cubes:

24. A net has 2 squares side-by-side, then 4 more squares attached. Could it be a cube net? Explain.

25. Draw a net for a square pyramid with base 3 cm × 3 cm and slant height 4 cm

26. What is the total surface area of the cube net from question 4 (with 2 cm sides)?

27. Using the cuboid dimensions from question 6 (5 × 3 × 2 cm), calculate the total surface area from its net.