

Surface Area

Name:

Date:

INQUIRY

How much wrapping paper would you need to completely cover a mooncake box ?

Discuss with your partner. Write your initial ideas below:

Key Vocabulary

Term	Definition
Surface area	Total area of ALL outside faces of a 3D shape.
Net	A 2D shape that folds into a 3D shape.

Part A — Cubes

1. Surface area of a cube with side 5 cm. [2 marks]

Show your working:

2. A cube has $SA = 150 \text{ cm}^2$. Find the side length. [2 marks]

Show your working:

Part B — Rectangular Prisms

3. SA of a rectangular prism: $8\text{ cm} \times 5\text{ cm} \times 3\text{ cm}$. [3 marks]

Show your working:

4. A mooncake box : $25\text{ cm} \times 25\text{ cm} \times 8\text{ cm}$. Total SA of cardboard needed? [3 marks]

Show your working:

5. A Korean gimbap lunchbox: $20\text{ cm} \times 12\text{ cm} \times 6\text{ cm}$. How much plastic wrap needed? [3 marks]

Show your working:

Part C — Triangular Prisms

6. Triangular prism: triangle base 6 cm , height 4 cm , sides 5 cm each, length 10 cm . Find total SA. [4 marks]

Show your working:

7. A Toblerone box: triangle base 3.5 cm , height 3 cm , length 21 cm . Find total SA. [4 marks]

Show your working: