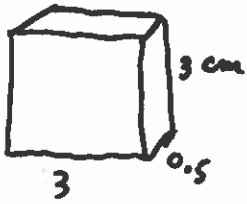


TOTAL AREA & VOLUME OF RECT. PRISMS

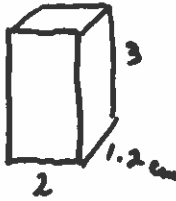
3

→ OF ALL RECTANGULAR PRISMS THAT HAVE THE SAME TOTAL AREA, THE CUBE WILL HAVE THE LARGEST VOLUME.



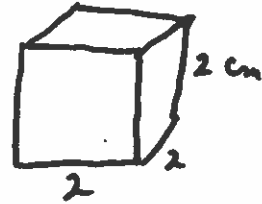
$$A_T = 24 \text{ cm}^2$$

$$V = 4.5 \text{ cm}^3$$



$$A_T = 24 \text{ cm}^2$$

$$V = 7.2 \text{ cm}^3$$



$$A_T = 24 \text{ cm}^2$$

$$V = 8 \text{ cm}^3 \leftarrow \text{LARGEST VOLUME}$$

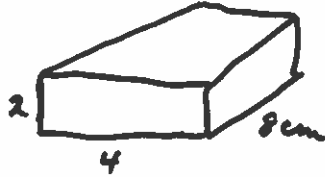
PRISMS

→ OF ALL RECTANGULARⁿ WITH THE SAME VOLUME, THE CUBE WILL BE THE ONE WITH THE SMALLEST TOTAL AREA.



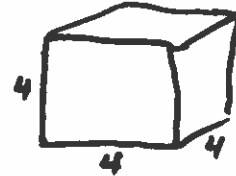
$$V = 64 \text{ cm}^3$$

$$A_T = 136 \text{ cm}^2$$



$$V = 64 \text{ cm}^3$$

$$A_T = 112 \text{ cm}^2$$



$$V = 64 \text{ cm}^3$$

$$A_T = 96 \text{ cm}^2 \leftarrow \text{SMALLEST TOTAL AREA}$$

Now DO ACTIVITY 3 AND ACTIVITY 4 FROM YOUR WORKBOOKS P. 134

* THIS ACTIVITY WILL PROVE TO YOU THAT:

→ OF ALL SOLIDS THAT HAVE THE SAME TOTAL AREA, THE SPHERE, WILL ALWAYS BE THE ONE WITH THE LARGEST VOLUME.

→ OF ALL SOLIDS AND THAT HAVE THE SAME VOLUME, THE SPHERE, WILL ALWAYS HAVE THE SMALLEST TOTAL AREA.