

## Surface Area of Rectangular Prisms

\* How much space it takes to cover ALL sides of a rectangular prism.

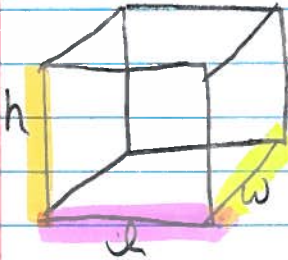
$$\text{Formula} = SA = 2lw + 2lh + 2wh$$

Examples \* how much wrapping paper is needed to cover a box

\* how much stain is needed to paint a dresser.

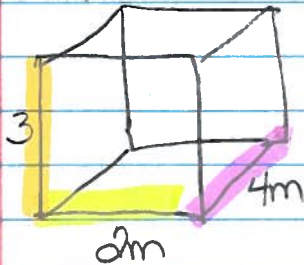
\* fabric needed to cover a mattress

\* paint to cover a box.



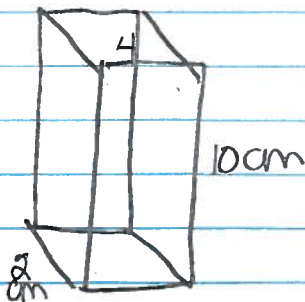
Examples

①



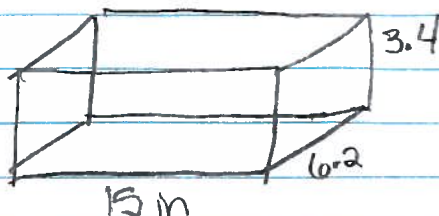
$$\begin{aligned} SA &= 2lw + 2lh + 2wh \\ &= 2(2)(4) + 2(2)(3) + 2(4)(3) \\ &= 16 + 12 + 24 \\ SA &= 52 \text{ m}^2 \end{aligned}$$

②



$$\begin{aligned} SA &= 2lw + 2lh + 2wh \\ &= 2(4)(2) + 2(4)(10) + 2(2)(10) \\ &= 16 + 80 + 40 \\ SA &= 136 \text{ cm}^2 \end{aligned}$$

③



$$\begin{aligned} SA &= 2lw + 2lh + 2wh \\ &= 2(15)(6.2) + 2(15)(3.4) + 2(6.2)(3.4) \\ &= 186 + 102 + 42.16 \\ SA &= 330.16 \text{ m}^2 \end{aligned}$$