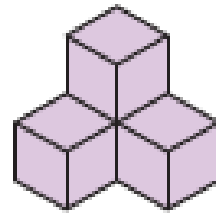


November 13, 2015

Warm-Up

What is the total surface area?
show all work/calculations!!!



of cubes \times SA of 1 cube

$$4 \times 6 = 24 \text{ units}^2$$

TSA - faces lost

$$24 - 6 = 18 \text{ units}^2$$

3. B) small

(A)

| | | | |
|--|--|--|---------------------|
| T/B | sides | F/B | |
| $\boxed{x2} \ 2$ $\underline{\quad 2}$ | $\boxed{x2} \ 1$ $\underline{\quad 2}$ | $\boxed{x2} \ 1$ $\underline{\quad 2}$ | |
| $A = bh$ $= 2 \times 2$ $= 4$ $\times 2$ $\underline{\quad 8}$ | $A = bh$ $= 2 \times 1$ $= 2$ $\times 2$ $\underline{\quad 4}$ | $A = bh$ $= 2 \times 1$ $= 2$ $\times 2$ $\underline{\quad 4}$ | $= 16 \text{ cm}^2$ |

Middle

| | | | |
|--|---|---|---------------------|
| T/B | sides | F/B | |
| $\boxed{x2} \ 3$ $\underline{\quad 4}$ | $\boxed{x2} \ 2$ $\underline{\quad 3}$ | $\boxed{x2} \ 2$ $\underline{\quad 4}$ | |
| $A = bh$ $= 4 \times 3$ $= 12$ $\times 2$ $\underline{\quad 24}$ | $A = bh$ $= 3 \times 2$ $= 6$ $\times 2$ $\underline{\quad 12}$ | $A = bh$ $= 4 \times 2$ $= 8$ $\times 2$ $\underline{\quad 16}$ | $= 52 \text{ cm}^2$ |

Bottom

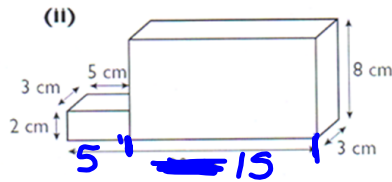
| | | | |
|--|--|--|--------------------|
| T/B | sides | F/B | |
| $\boxed{x2} \ 4$ $\underline{\quad 6}$ | $\boxed{x2} \ 3$ $\underline{\quad 4}$ | $\boxed{x2} \ 3$ $\underline{\quad 6}$ | |
| $A = bh$ $= 6 \times 4$ $= 24$ $\times 2$ $\underline{\quad 48}$ | $A = bh$ $= 4 \times 3$ $= 12$ $\times 2$ $\underline{\quad 24}$ | $A = bh$ $= 6 \times 3$ $= 18$ $\times 2$ $\underline{\quad 36}$ | 108 cm^2 |

$$108 + 52 + 16 = 176 \text{ cm}^2$$

$$- 32$$

$$\hline 144 \text{ cm}^2$$

Warm-Up
November 13, 2015



| | | |
|---|---|---|
| front/back | sides | top/bottom |
| <div style="border: 1px solid black; padding: 5px; width: 60px; margin: 0 auto;">x2</div> <p style="text-align: center; color: red;">5 2</p> | <div style="border: 1px solid black; padding: 5px; width: 60px; margin: 0 auto;">x2</div> <p style="text-align: center; color: red;">3 2</p> | <div style="border: 1px solid black; padding: 5px; width: 60px; margin: 0 auto;">x2</div> <p style="text-align: center; color: red;">5 3</p> |
| $A = bh$ $= 5 \times 2$ $= 10$ <hr style="width: 50%; margin: 0 auto;"/> $\frac{x2}{20}$ | $A = bh$ $= 3 \times 2$ $= 6$ <hr style="width: 50%; margin: 0 auto;"/> $\frac{x2}{12}$ | $A = bh$ $= 5 \times 3$ $= 15$ <hr style="width: 50%; margin: 0 auto;"/> $\frac{x2}{30}$ |
| $\frac{x2}{20} + \frac{x2}{12} + \frac{x2}{30} = 62$ Total 20 + 12 + 30 = 62 cm² | | |

| | | |
|---|--|--|
| sides | front/back | top/bottom |
| <div style="border: 1px solid black; padding: 5px; width: 60px; margin: 0 auto;">x2</div> <p style="text-align: center; color: red;">8 3</p> | <div style="border: 1px solid black; padding: 5px; width: 60px; margin: 0 auto;">x2</div> <p style="text-align: center; color: red;">8 15</p> | <div style="border: 1px solid black; padding: 5px; width: 60px; margin: 0 auto;">x2</div> <p style="text-align: center; color: red;">3 15</p> |
| $A = bh$ $= 8 \times 3$ $= 24$ <hr style="width: 50%; margin: 0 auto;"/> $\frac{x2}{48}$ | $A = bh$ $= 15 \times 8$ $= 120$ <hr style="width: 50%; margin: 0 auto;"/> $\frac{x2}{240}$ | $A = bh$ $= 15 \times 3$ $= 45$ <hr style="width: 50%; margin: 0 auto;"/> $\frac{x2}{90}$ |
| Total 240 + 48 + 90 = 378 | | |

62 + 378 = 440 total

Total - Connections 440 - 12 = 428 cm²

1. Complete the Surface area of cubes worksheet...hand in your work. You will not receive any marks if all you give is an answer...**YOU MUST SHOW YOUR WORK/ CALCULATIONS!!!**

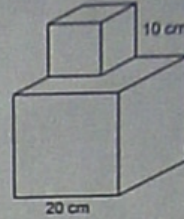
2. Complete questions 1, 2, 3 on the worksheet for Monday

↑
Do NOT WRITE
ON THE SHEET!!

Surface Area

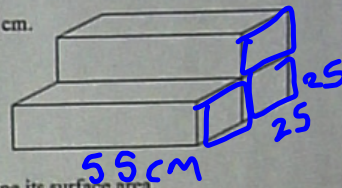
1. This composite object is made of a 10-cm cube on top of a 20-cm cube. Determine its surface area.

2800 cm^2

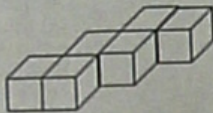


2. This object is made from 3 identical right rectangular prisms. Each prism is 55 cm long and has square ends of side length 25 cm. What is the surface area of the object?

14750 cm^2

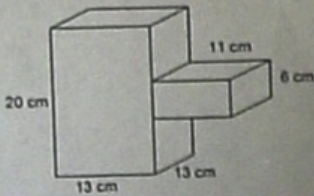


3. This composite object is made using centimetre cubes. Determine its surface area.



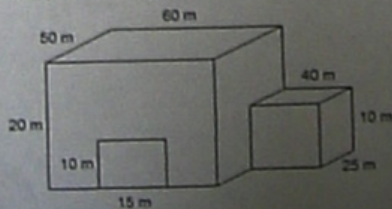
4. This object is composed of a right rectangular prism attached to the side of a larger right rectangular prism. Determine the surface area of the object.

1796 cm^2



5. A warehouse measures 60 m by 50 m by 20 m. It has an open door that measures 15 m by 10 m on the front. A store room that measures 40 m by 25 m by 10 m is attached to one wall of the warehouse. Determine the total surface area of the warehouse building. Show your calculations.

9200 cm^2
No floor.
with door



Answer without