

REMEMBER: Partial credit is granted only when work is shown and comprehensible!

Find the surface area and volume of each 3D figure. Don't forget to label your answers!

SA: F/B | 4/R | T/B

$2.4 \square \times 2$ 4.5	$2.4 \square \times 2$ 1.8	$1.8 \square \times 2$ 4.5
8.64	8.64	8.1
21.6	21.6	16.2
8.64 + 21.6 + 16.2 = 46.44		

V: $2.4 \times 4.5 \times 1.8 = 19.44 \text{ cm}^3$

1) Surface Area = 46.44 cm^2

2) Volume = 19.44 cm^3

F/B | L | D | B

$9 \triangle \times 2$ 5.7	$4 \square$ 9	$7 \square$ 9	$9 \square$ 5.7
22.8	36	63	51.3

$4 \times 5.7 \times 9 = 102.6$

3) Surface Area = 173.1 cm^2

4) Volume = 102.6 cm^3

F/B | B | T | B

$6 \triangle \times 2$ 8	$4 \square$ 10	$4 \square$ 11	$11 \square$ 8
48	40	44	88

$(\frac{6 \times 8}{2}) \times 11 = 264$

5) Surface Area = 265 yd^2

6) Volume = 264 yd^3

F/B | T/B | 4/R

$4 \square \times 2$ 15	$15 \square$ 4	$4 \square \times 2$ 10
30	60	80

$15 \times 10 \times 4 = 600$

7) Surface Area = 500 in^2

8) Volume = 600 in^3

T/B | E | R | B

$6 \triangle \times 2$ 8	$6 \square$ 18	$8 \square$ 18	$18 \square$ 8
48	108	144	180

$(\frac{6 \times 8}{2}) \times 18 = 480$

9) Surface Area = 480 mm^2

10) Volume = 432 mm^3

T/B | 4/R | F/B

$6 \square \times 2$ 15	$6 \square \times 2$ 10	$15 \square \times 2$ 10
180	120	300

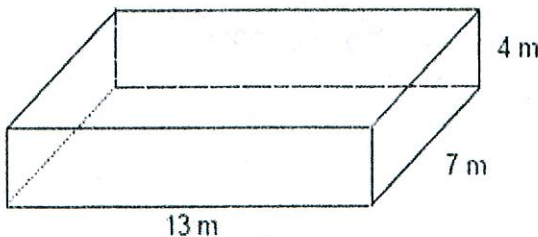
$15 \cdot 6 \cdot 10 = 900$

11) Surface Area = 600 m^2

12) Volume = 900 m^3

13.)

The Drama Club plans to paint the outside walls of this box to be used as a second level to their stage. Find the surface area of the box.



SURFACE AREA

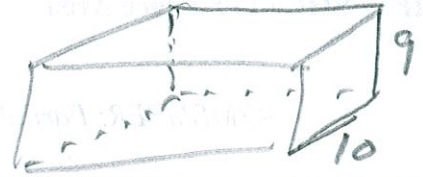
T/B	4/R	F/B
$13 \square \times 2$ 7	$4 \square \times 2$ 7	$4 \square \times 2$ 13
182	56	104

SA of Box: 342 m^2

SA of walls: 160 m^2

14) Samantha is putting wallpaper up in her room. Her room is 12 ft long, 10 ft wide and 9 ft high. Find the cost of putting wallpaper on four walls if the wallpaper costs \$0.30 per square foot.

(Hint: Do not include the ceiling and floor) *SURFACE AREA*



Total Area Wallpapered : 396 FT²

Cost: \$118.80

$$\begin{array}{r} 396 \\ \times .3 \\ \hline \end{array}$$

L/R	F/R
$10 \square \times 2$	$12 \square \times 2$
180	216

15) Hector is digging a rectangular hole to prepare for the foundation of a new building. How many cubic meters of dirt must be removed if the measurements are 32 meters long, 12 meters wide, and 8 meters deep?



VOLUME $8 \cdot 12 \cdot 32$

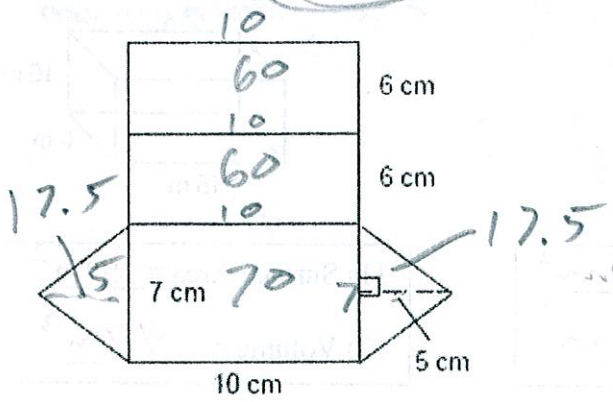
3072 m³

16) If concrete costs \$1.50 per cubic meter, how much would it cost to fill that hole with concrete?

$$\begin{array}{r} 3072 \\ \times 1.5 \\ \hline \end{array}$$

\$4608.00

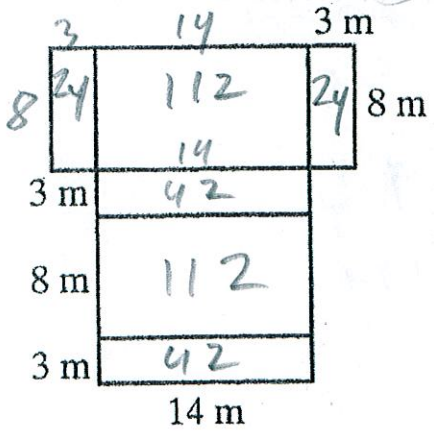
18) Name and find the Surface Area of the net



$$\begin{array}{r} 60.0 \\ + 60.0 \\ \hline 120.0 \\ + 17.5 \\ \hline 137.5 \\ \times 2 \\ \hline 275.0 \\ + 50.0 \\ \hline 325.0 \end{array}$$

TRIANGULAR PRISM
225 cm²

19) Name and find the Surface Area of the net



$$\begin{array}{r} 24 \\ + 24 \\ \hline 48 \\ + 112 \\ \hline 160 \\ + 42 \\ \hline 202 \\ \times 2 \\ \hline 404 \\ + 152 \\ \hline 556 \end{array}$$

RECTANGULAR PRISM
356 m²