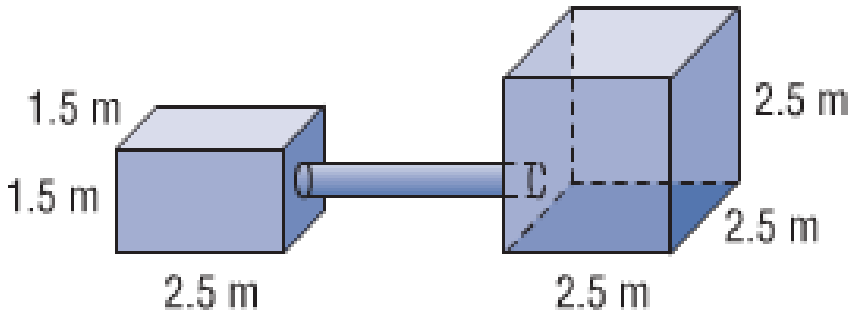
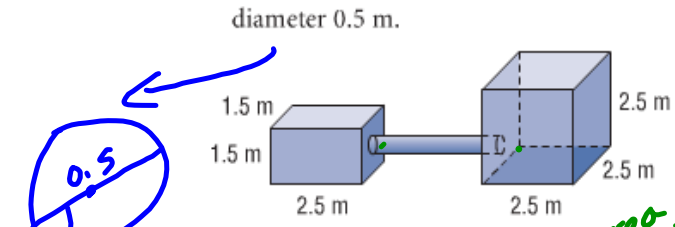
Warm-Up Page 40

#4

62.1 m^2

b) The cylinder is 3.5 m long with diameter 0.5 m.





$SA = 2\pi r^2 + 2\pi rh$

$= 2(3.14)(0.25)^2 + 2(3.14)(0.25)(3.5)$

$= 0.3925 + 5.495$

$= 5.8875$

area of two circles

62.1 m^2

Rectangular Prism

F/B: x2, 1.5, 2.5 → $A = bh = (2.5)(1.5) = 3.75 \times 2 = 7.5$

T/B: x2, 1.5, 2.5 → $A = bh = (2.5)(1.5) = 3.75 \times 2 = 7.5$

sides: 1.5, 1.5 → $A = bh = 1.5 \times 1.5 = 2.25 \times 2 = 4.5$

(19.50)

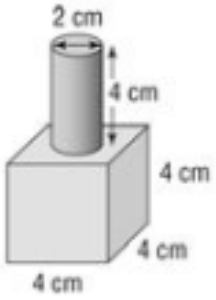
Cube: x6, 2.5, 2.5 → $A = bh = 2.5 \times 2.5 = 6.25 \times 6 = 37.5$

$19.5 + 37.5 + 5.89 - 0.785 = 61.1\ m^2$

Homework Questions????

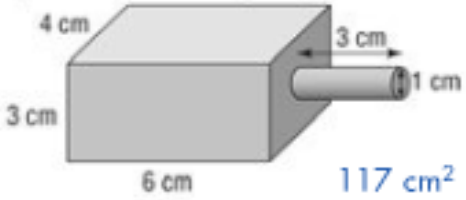
3. Determine the surface area of each composite object. Give the answers to the nearest whole number.

a) cylinder on a cube



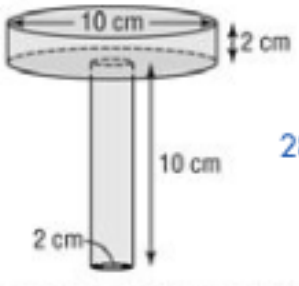
121 cm^2

b) cylinder on a rectangular prism



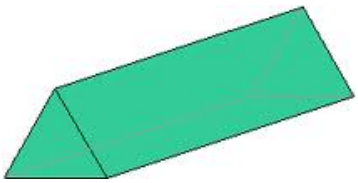
117 cm^2

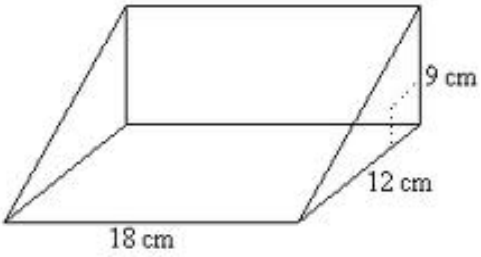
c) cylinder on a cylinder

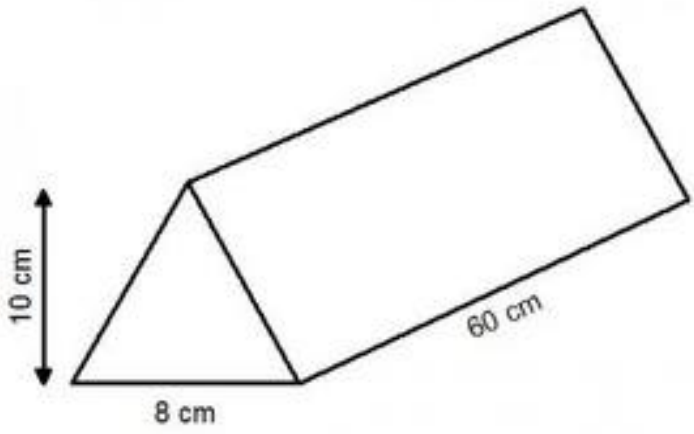


283 cm^2

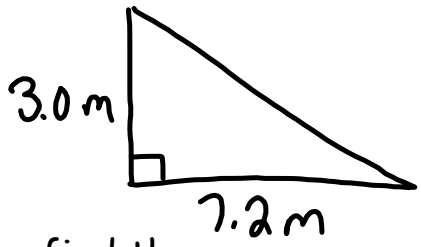
Surface area of Triangular Prism

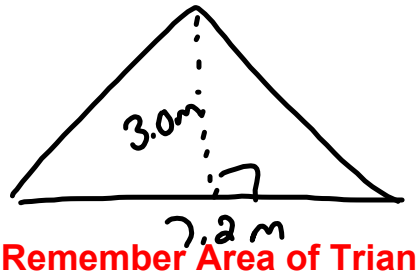






1. Sketch a triangle that has a base 7.2 m, height 3.0 m





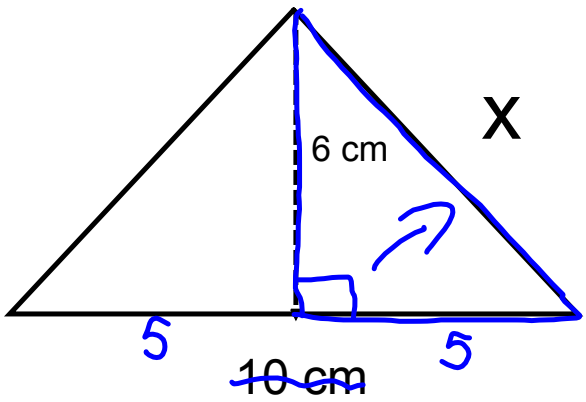
Then find the area.

$$A = \frac{bh}{2}$$
$$= \frac{7.2 \times 3}{2}$$
$$= 10.8\ m^2$$

Remember Area of Triangle

$$A = \frac{bh}{2}$$

Find the length of "x"



$c^2 = a^2 + b^2$

$c^2 = 5^2 + 6^2$

$c^2 = 25 + 36$

$\sqrt{c^2} = \sqrt{61}$

$c = 7.8\text{ cm}$

Right Triangular Prism

same

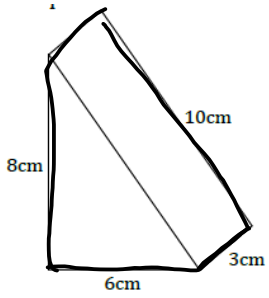
A right triangular prism has 5 faces:

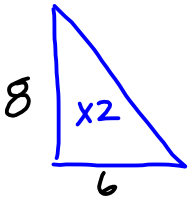
- 2 congruent triangular faces
- 3 rectangular faces

The surface area of a triangular prism is the sum of the all 5 faces.

Surface area = 2 × area of triangle + areas of rectangular faces

Draw the 5 faces!!!



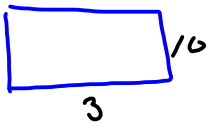


$A = \frac{bh}{2}$

$= \frac{6 \times 8}{2}$

$= \frac{48}{2}$

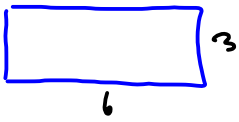
$= 24 \times 2 = 48$



$A = bh$

$= 3 \times 10$

$= 30$



$A = bh$

$= 6 \times 3$

$= 18$

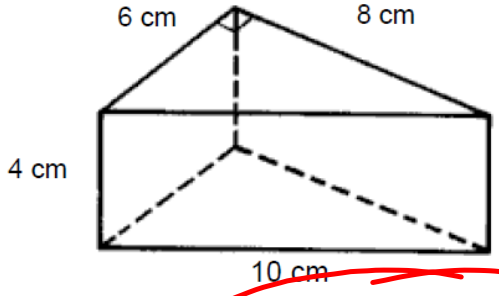
$A = bh$

$= 8 \times 3$

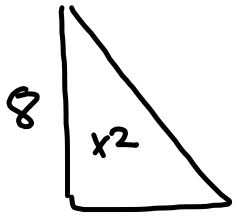
$= 24$

$+ \quad = 72$

$TSA = 72 + 48 = 120\ cm^2$



TSA = 48 + 96
= 144 cm²



$A = \frac{bh}{2}$
$= \frac{8 \times 6}{2}$
$= 24$
$\times 2$
48

A = bh
= 4 x 10
= 40

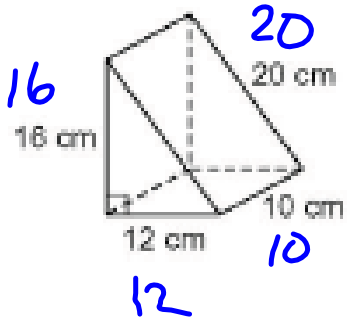
+

A = bh
= 4 x 6
= 24

+

A = bh
= 8 x 4
= 32

96



Draw the faces

Find the surface area

Attachments

nov22.notebook