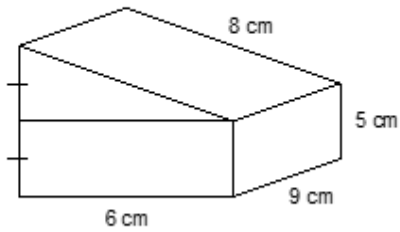


- \_\_\_\_ 1. This object is composed of a right triangular prism on top of a right rectangular prism. Determine the surface area of the object.

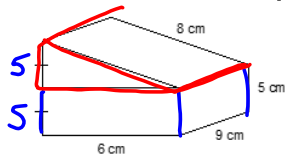


- a.  $351 \text{ cm}^2$    b.  $297 \text{ cm}^2$    c.  $207 \text{ cm}^2$    d.  $441 \text{ cm}^2$

# Warm-Up

November 25, 2015

1. This object is composed of a right triangular prism on top of a right rectangular prism. Determine the surface area of the object.



- a.  $351 \text{ cm}^2$    b.  $297 \text{ cm}^2$    c.  $207 \text{ cm}^2$    d.  $441 \text{ cm}^2$

T/B

$$\begin{array}{r} 9 \\ \times 2 \\ \hline 18 \end{array}$$

$A = bh$   
 $= 9 \times 6$   
 $= 54$   
 $\times 2$   
108

F/B

$$\begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array}$$

$A = bh$   
 $= 5 \times 6$   
 $= 30$   
 $\times 2$   
60

side

$$\begin{array}{r} \times 2 \\ \hline 18 \end{array}$$

$A = bh$   
 $= 9 \times 5$   
 $= 45$   
 $\times 2$   
90

$258 + 90 = 348 \text{ cm}^2$

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

$$= \frac{6 \times 5}{2}$$

$$= \frac{30}{2}$$

$$= 15$$

$$\times 2$$

$$= 30$$

$$\begin{array}{r} 9 \\ \times 6 \\ \hline 54 \end{array}$$

$A = bh$   
 $= 6 \times 9 = 54$

$$\begin{array}{r} 5 \\ \times 9 \\ \hline 45 \end{array}$$

$A = bh$   
 $= 5 \times 9 = 45$

$$\begin{array}{r} 8 \\ \times 9 \\ \hline 72 \end{array}$$

$A = bh$   
 $= 8 \times 9$   
 $= 72$

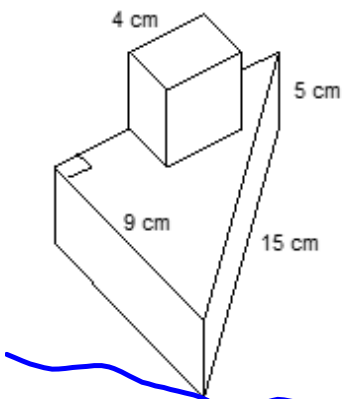
**A**

$$258 + 201 = 459$$

$$\begin{array}{r} 459 \\ - 108 \\ \hline 351 \end{array}$$

$351 \text{ cm}^2$

2. A 4-cm cube is attached to the top of a right triangular prism as shown. Determine the surface area of the composite object, to the nearest square centimetre.

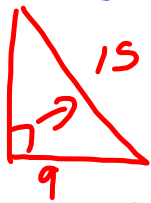


a.  $298 \text{ cm}^2$

b.  $352 \text{ cm}^2$

c.  $336 \text{ cm}^2$

d. 36



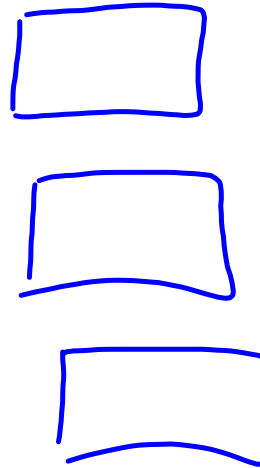
$$c^2 = a^2 + b^2$$

$$15^2 = 9^2 + b^2$$

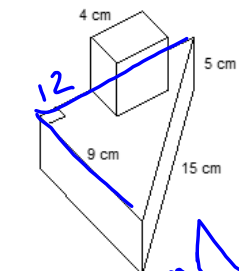
$$225 = 81 + b^2$$

$$\sqrt{b^2} = \sqrt{144}$$

$$b = 12$$



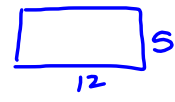
2. A 4-cm cube is attached to the top of a right triangular prism as shown. Determine the surface area of the composite object, to the nearest square centimetre.



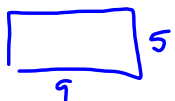
- a.  $298 \text{ cm}^2$       b.  $352 \text{ cm}^2$       c.  $336 \text{ cm}^2$       d.  $368 \text{ cm}^2$

$$\begin{aligned} c^2 &= a^2 + b^2 \\ 15^2 &= 9^2 + b^2 \\ 225 &= 81 + b^2 \\ 144 &= b^2 \\ b &= 12 \end{aligned}$$

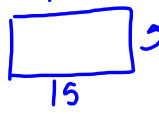
$$\begin{aligned} A &= \frac{bh}{2} \\ &= \frac{9 \times 12}{2} \\ &= \frac{108}{2} \\ &= 54 \times 2 = 108 \end{aligned}$$



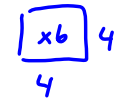
$$\begin{aligned} A &= bh \\ &= 12 \times 5 \\ &= 60 \end{aligned}$$



$$\begin{aligned} A &= bh \\ &= 9 \times 5 \\ &= 45 \end{aligned}$$



$$\begin{aligned} A &= bh \\ &= 15 \times 5 \\ &= 75 \end{aligned}$$



$$\begin{aligned} A &= bh \\ &= 4 \times 4 \\ &= 16 \end{aligned}$$

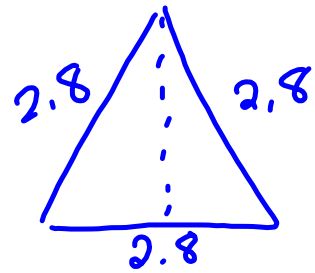
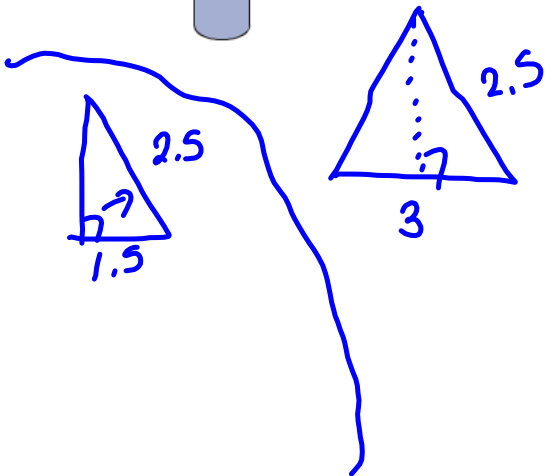
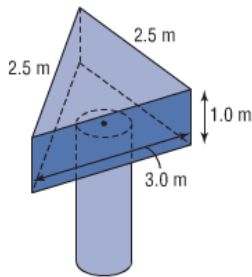
$\leftarrow \times 2$

$$180 + 288 = 468$$

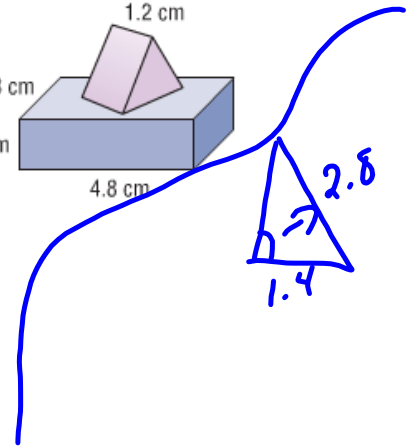
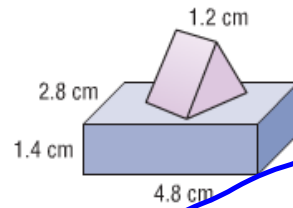
$$\begin{aligned} 468 + 96 &= 564 \\ - 32 & \\ \hline & \end{aligned}$$

**352 cm<sup>2</sup>**

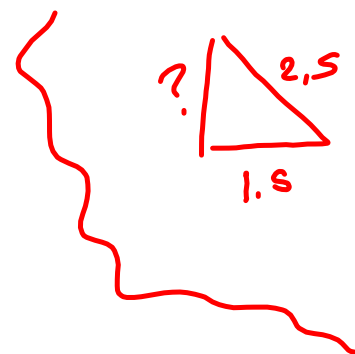
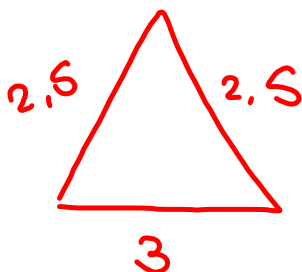
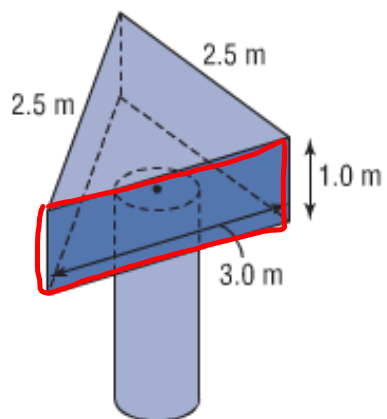
a) The cylinder is 2.5 m long with radius 0.5 m.



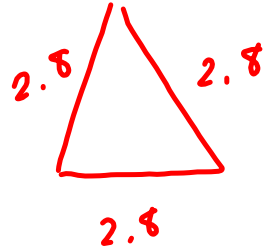
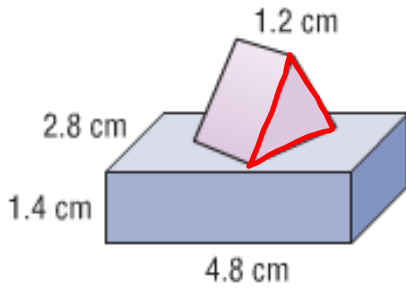
b) The base of the triangular prism is an equilateral triangle with side length 2.8 cm.



a) The cylinder is 2.5 m long with radius 0.5 m.



b) The base of the triangular prism is an equilateral triangle with side length 2.8 cm.



$21.9 \text{ m}^2$

$58.3 \text{ cm}^2$

Page 40-41  
#5 a, b

#6

$707 \text{ cm}^2$

Quiz

6. Here is the lamp stand from the top of page 33. The base of the lamp is a triangular prism with an equilateral triangle base. The surface of the stand is to be painted. What is the area that will be painted? Give the answer to the nearest whole number.

