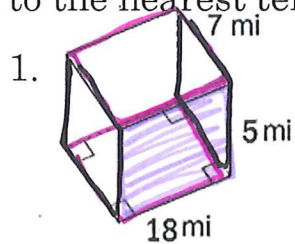


Name: Key

Math Focus Reteach

SA and Volume Warm-Up/Reteach Prisms and Pyramids

Directions: Find the surface area and volume of each figure. Round your answers to the nearest tenth, if necessary.



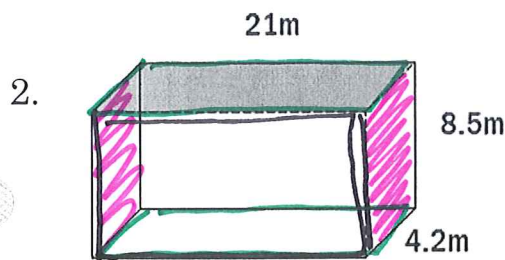
Area of the base:
 $B = 5 \cdot 18$

Work for SA:
 $2(5 \cdot 18)$
 $2(7 \cdot 5)$
 $2(18 \cdot 7)$

 502

Work for Volume:
 $V = B \cdot H$
 $B = 5 \cdot 18$
 $H = 7$
 $V = 5 \cdot 18 \cdot 7$

SA = 502 mi² V = 630 mi³



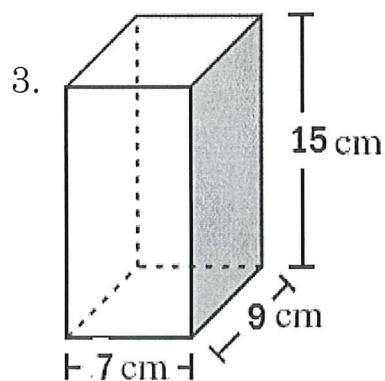
Area of the base:
 $B = 8.5 \cdot 4.2$

Work for SA:
 $2(4.2 \cdot 8.5)$
 $2(4.2 \cdot 21)$
 $2(21 \cdot 8.5)$

 604.8 m^2

Work for Volume:
 $V = 4.2 \cdot 8.5 \cdot 21$

SA = 604.8 m² V = 749.7 m³



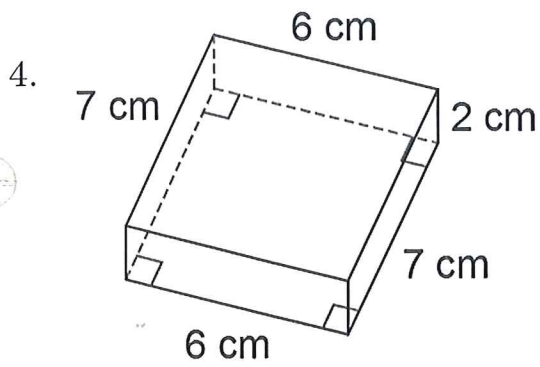
Area of the base:
 $B = 7 \cdot 9$

Work for SA:
 $2(7 \cdot 9)$
 $2(15 \cdot 9)$
 $2(15 \cdot 7)$

 606 cm^2

Work for Volume:
 $V = 7 \cdot 9 \cdot 15$

SA = 606 cm² V = 945 cm³

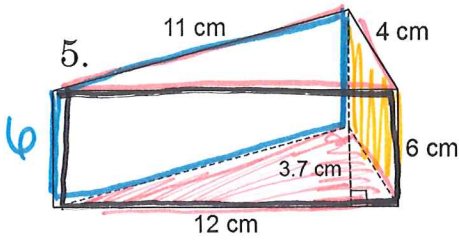


Area of the base: $B = 6 \cdot 7$

Work for SA:
 $2(6 \cdot 7)$
 $+ 2(2 \cdot 7)$
 $+ 2(6 \cdot 2)$

Work for Volume:
 $V = 6 \cdot 7 \cdot 2$

SA = 136 cm² V = 84 cm³



Work for SA:

$2(\frac{1}{2} 12 \cdot 3.7)$
 $+ 4 \cdot 6$
 $+ 6 \cdot 11$
 $+ 12 \cdot 6$

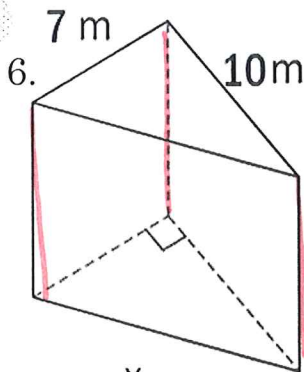
Work for Volume:

$V = B \cdot H$
 $B = \frac{1}{2} \cdot 12 \cdot 3.7$
 $H = 6$
 $V = \frac{1}{2} 12 \cdot 3.7 \cdot 6$

Area of the base:

$B = \frac{1}{2} 12 \cdot 3.7$

SA = 206.4 cm² V = 133.2 cm³



Area of the base:

Find x

 $x = \sqrt{149}$
 $x \approx 12.2$
 $B = \frac{1}{2} 7 \cdot 10$

Work for SA:

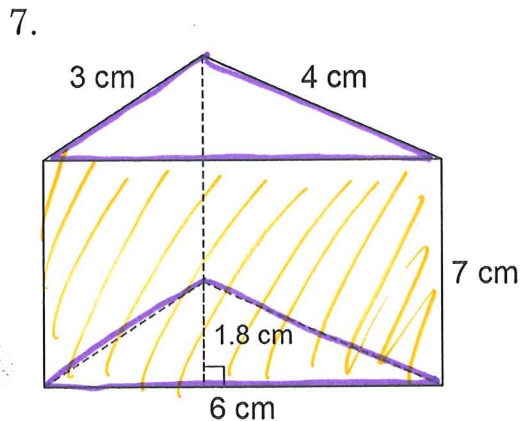
$2(\frac{1}{2} 7 \cdot 10)$
 $+ 12.2 \cdot 15$
 $+ 15 \cdot 10$
 $+ 7 \cdot 15$

Work for Volume:

$V = B \cdot H$
 $B = \frac{1}{2} 7 \cdot 10, H = 15$
 $V = \frac{1}{2} 7 \cdot 10 \cdot 15$

$x = \underline{12.2 m}$

SA = 508 m² V = 525 m³



Work for SA:

$2(\frac{1}{2} 6 \cdot 1.8)$
 $+ 7 \cdot 6$
 $+ 4 \cdot 7$
 $+ 3 \cdot 7$

Work for Volume:

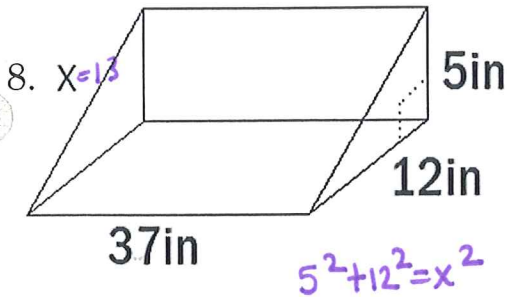
$V = B \cdot H$
 $B = \frac{1}{2} \cdot 6 \cdot 1.8, H = 7$
 $V = \frac{1}{2} \cdot 6 \cdot 1.8 \cdot 7$

Area of the base:

$B = \frac{1}{2} 6 \cdot 1.8$

SA = 101.8 cm² V = 37.8 cm³

Area of the base: $B = \frac{1}{2} \cdot 12 \cdot 5$



Work for SA:

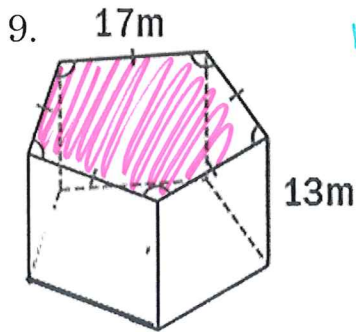
$$\begin{aligned} &2 \cdot \frac{1}{2} \cdot 12 \cdot 5 \\ &+ 12 \cdot 37 \\ &+ 5 \cdot 37 \\ &\hline &13 \cdot 37 \end{aligned}$$

Work for Volume:

$$\begin{aligned} V &= B \cdot H \\ B &= \frac{1}{2} \cdot 12 \cdot 5 \quad H = 37 \\ V &= \frac{1}{2} \cdot 12 \cdot 5 \cdot 37 \end{aligned}$$

$x = 13 \text{ in}$

SA = 1170 in² V = 1110 in³



Area of the base: $B = n \cdot \frac{1}{2} ab \sin \theta$
 $n = 5$ $\theta = 72^\circ$
 $a = 14.5$
 $b = 14.5$

$\cos(54^\circ) = \frac{8.5}{r}$
 $r = 14.5$

$B = 5 \cdot \frac{1}{2} \cdot 14.5 \cdot 14.5 \cdot \sin(72^\circ)$

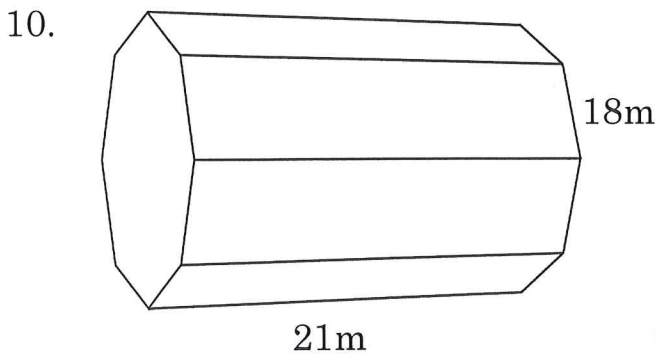
Work for SA:

$$\begin{aligned} &2 \left(5 \cdot \frac{1}{2} \cdot 14.5 \cdot 14.5 \cdot \sin(72^\circ) \right) \\ &+ 5 \cdot 17 \cdot 13 \end{aligned}$$

Work for Volume:

$$\begin{aligned} V &= B \cdot H \quad H = 13 \\ V &= 5 \cdot \frac{1}{2} \cdot 14.5 \cdot 14.5 \cdot \sin(72^\circ) \cdot 13 \end{aligned}$$

SA = 2104.8 m² V = 6498.7 m³



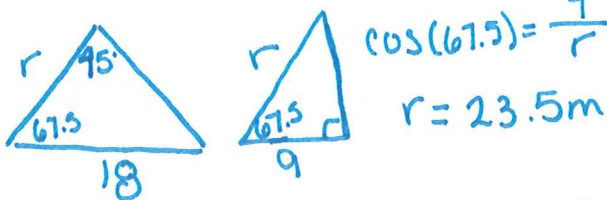
Work for SA:

$$\begin{aligned} &2 \left(8 \cdot \frac{1}{2} \cdot 23.5^2 \cdot \sin(45^\circ) \right) \\ &+ 8 \cdot 21 \cdot 18 \\ &\hline SA &= 6147.997 \\ SA &\approx 6148.0 \end{aligned}$$

Work for Volume:

$$\begin{aligned} V &= B \cdot H \\ B &= 8 \cdot \frac{1}{2} \cdot 23.5 \cdot 23.5 \cdot \sin(45^\circ) \\ H &= 21 \\ V &= 8 \cdot \frac{1}{2} \cdot 23.5^2 \cdot \sin(45^\circ) \cdot 21 \\ V &= 32801.976 \end{aligned}$$

Area of the base: $B = n \cdot \frac{1}{2} ab \sin \theta$

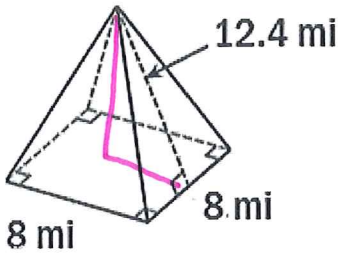


$$B = 8 \cdot \frac{1}{2} \cdot 23.5 \cdot 23.5 \cdot \sin(45^\circ)$$

SA = 6148.0 m² V = 32802.0 m³

Area of the base: $B = 8.8$

11.



Work for SA:

$$\begin{aligned} \text{Base: } &+ 8.8 \\ 4 \Delta s: &4 \cdot \frac{1}{2} \cdot 8 \cdot 12.4 \\ \hline &262.4 \end{aligned}$$

Work for Volume:

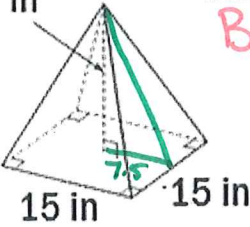
$$\begin{aligned} V &= \frac{1}{3} B \cdot H \\ B &= 8.8, H = 11.7 \\ V &= \frac{1}{3} \cdot 8.8 \cdot 11.7 \end{aligned}$$

Find H $4^2 + H^2 = 12.4^2$
 $H = \sqrt{137.76}$
 $H = 11.7$

SA = 262.4 mi²

V = 249.6 mi³

12. 17 in



Area of the base:

$B = 15 \cdot 15$

Work for SA:

$$\begin{aligned} \text{Base} &\rightarrow 15 \cdot 15 \\ 4 \Delta s &\rightarrow 4 \cdot \frac{1}{2} \cdot 15 \cdot 18.6 \\ \hline &783 \end{aligned}$$

Work for Volume:

$$\begin{aligned} V &= \frac{1}{3} B \cdot H \quad H = 17 \\ V &= \frac{1}{3} \cdot 15 \cdot 15 \cdot 17 \end{aligned}$$

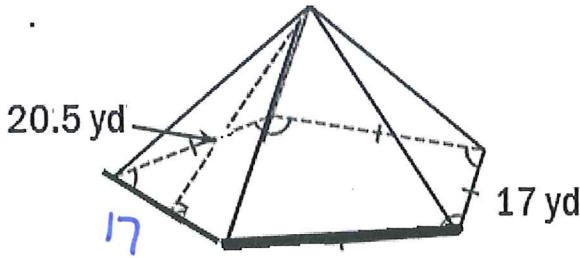
Find l $7.5^2 + 17^2 = l^2$
 $\sqrt{345.25} = l$ $l = 18.6$ in

SA = 783 in²

V = 1275 in³

Directions: Find the surface area for the following pyramid.

13.



SA = 871.25 yd²

Surface Area
 $+ 5 \cdot \frac{1}{2} \cdot 14.5 \cdot 14.5 \sin(72)$
 $+ 5 \cdot \frac{1}{2} \cdot 17 \cdot 20.5$
 $\hline 871.25$

Area of the base:

$B = n \frac{1}{2} ab \sin \theta$

$n = 5$
 $\theta = 72^\circ$
 $a = 14.5$
 $b = 14.5$

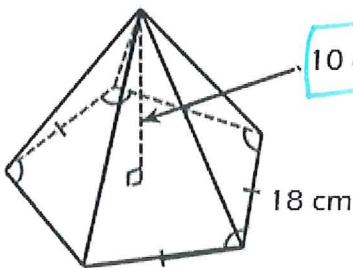


$\cos(54) = \frac{8.5}{r}$
 $r = 14.5$

$B = 5 \cdot \frac{1}{2} \cdot 14.5 \cdot 14.5 \sin(72)$

Directions: Find the volume for the following pyramid.

14.



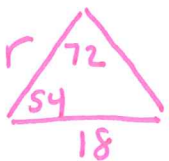
V = 1855.3 cm³

$V = \frac{1}{3} B \cdot H$

$V = \frac{1}{3} \cdot 5 \cdot \frac{1}{2} \cdot 15.3 \cdot 15.3 \sin(72) \cdot 10$

Area of the base:

$B = n \frac{1}{2} ab \sin \theta$



$\cos(54) = \frac{9}{r}$
 $15.3 = r$

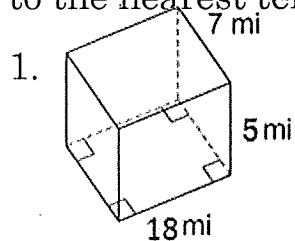
$B = 5 \cdot \frac{1}{2} \cdot 15.3 \cdot 15.3 \sin(72)$

Name: _____

Math Focus Reteach

SA and Volume Warm-Up/Reteach Prisms and Pyramids

Directions: Find the surface area and volume of each figure. Round your answers to the nearest tenth, if necessary.

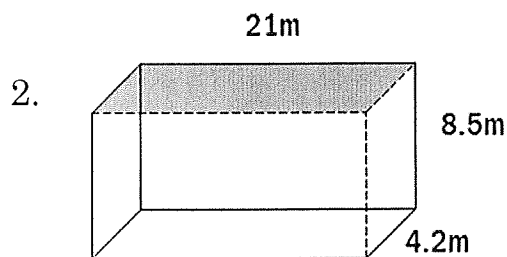


Area of the base:

Work for SA:

Work for Volume:

SA = _____ V = _____

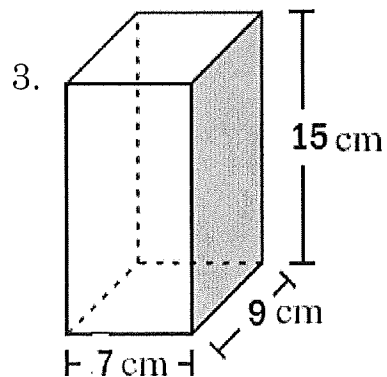


Area of the base:

Work for SA:

Work for Volume:

SA = _____ V = _____

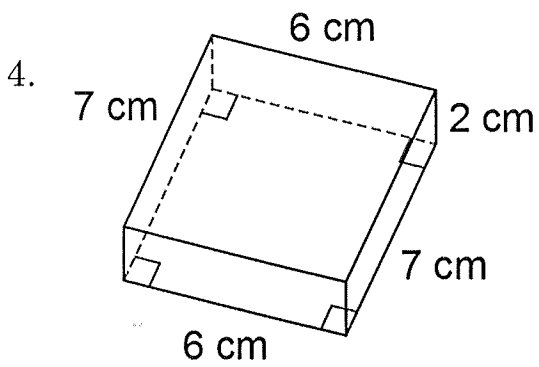


Area of the base:

Work for SA:

Work for Volume:

SA = _____ V = _____

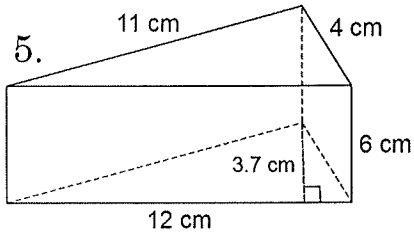


Area of the base:

Work for SA:

Work for Volume:

SA = _____ V = _____

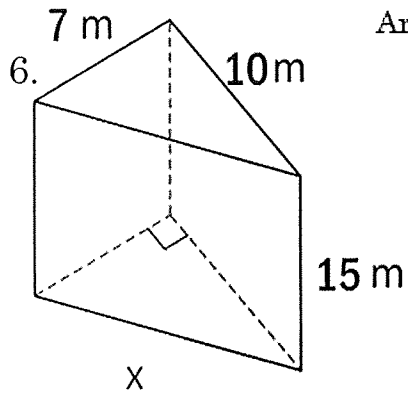


Work for SA:

Work for Volume:

SA = _____ V = _____

Area of the base:



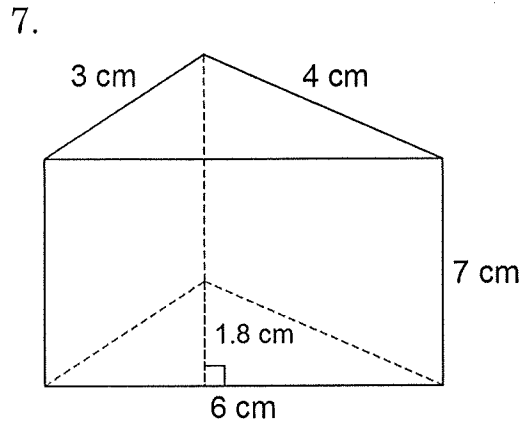
Area of the base:

Work for SA:

Work for Volume:

$x = \frac{\quad}{\quad}$
Round to tenth

SA = _____ V = _____



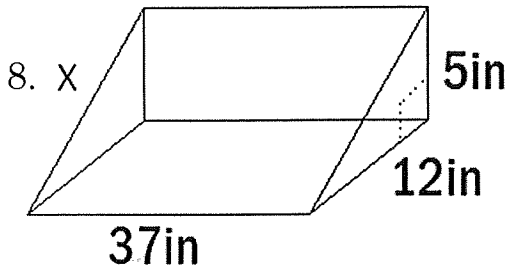
Work for SA:

Work for Volume:

Area of the base:

SA = _____ V = _____

Area of the base:



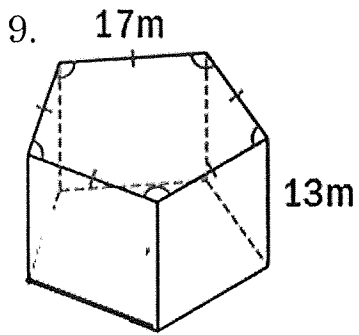
Work for SA:

Work for Volume:

x = _____

SA = _____ V = _____

Area of the base:

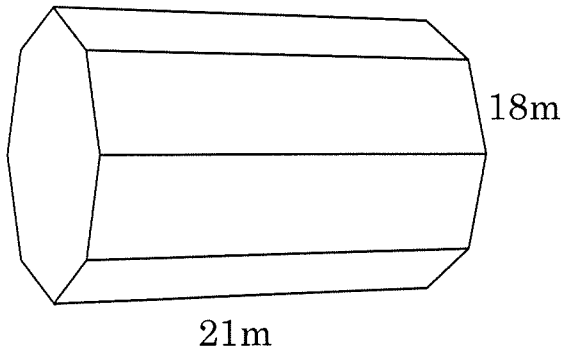


Work for SA:

Work for Volume:

SA = _____ V = _____

10.



Work for SA:

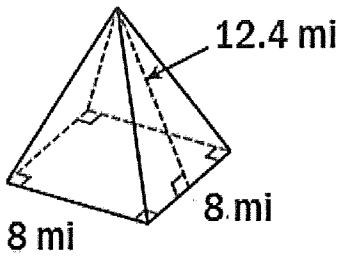
Work for Volume:

Area of the base:

SA = _____ V = _____

Area of the base:

11.



Work for SA:

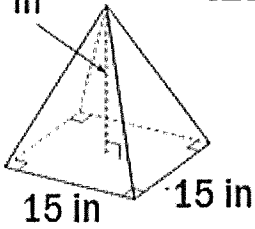
Work for Volume:

$H =$ _____

$SA =$ _____ $V =$ _____

12. 17 in

Area of the base:



Work for SA:

Work for Volume:

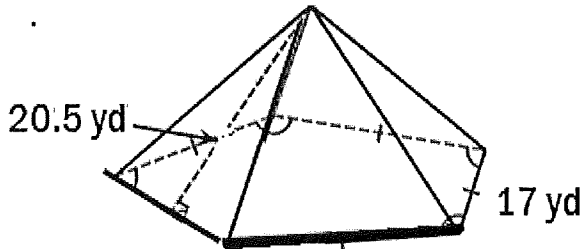
$h =$ _____

$SA =$ _____ $V =$ _____

Directions: Find the surface area for the following pyramid.

13.

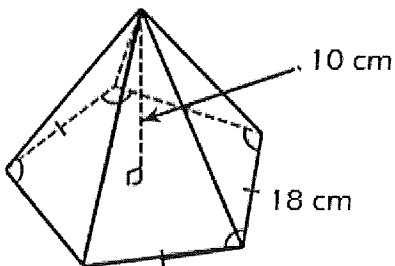
$SA =$ _____



Area of the base:

Directions: Find the volume for the following pyramid.

14.



$V =$ _____

Area of the base: