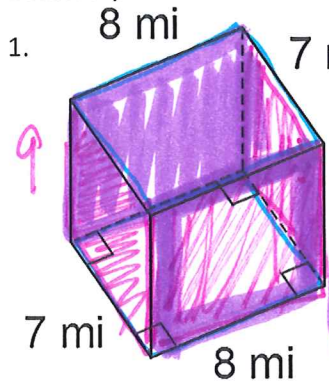


Name: Kley

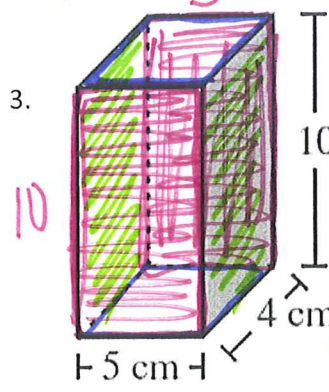
SA and Volume Warm-Up/Reteach Prisms

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



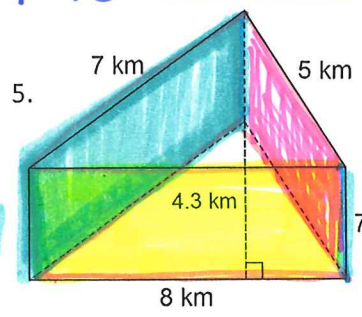
Surface Area  
 $2(8 \cdot 7)$   
 $+ 2(7 \cdot 9)$   
 $2(8 \cdot 9)$   
**SA = 382 mi<sup>2</sup>**

Volume =  $B \cdot H$   
 $B = 9 \cdot 8$   
 $H = 7$   
 $V = 9 \cdot 8 \cdot 7$  **V = 504 mi<sup>3</sup>**



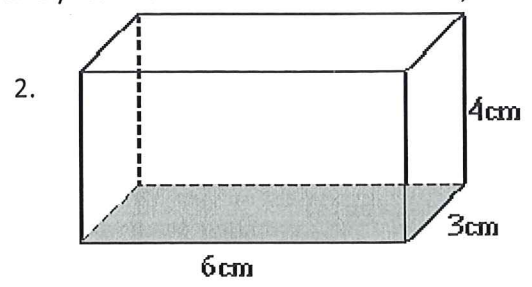
Surface Area  
 $2 \cdot 5 \cdot 4$   
 $+ 2 \cdot 10 \cdot 4$   
 $+ 2 \cdot 10 \cdot 5$   
**SA = 220 cm<sup>2</sup>**

area of base =  $5 \cdot 4$   
 $B = 5 \cdot 4$   
 $H = 10$   
 Volume =  $B \cdot H$   
 $V = 5 \cdot 4 \cdot 10$  **V = 200 cm<sup>3</sup>**

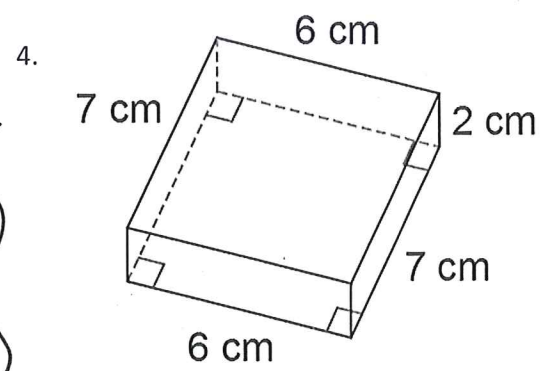


Surface Area  
 $2 \text{ bases} = 2(\frac{1}{2} 8 \cdot 4.3)$   
 $+ 8 \cdot 7$   
 $+ 7 \cdot 7$   
 $+ 5 \cdot 7$   
**SA = 174.4 km<sup>2</sup>**

area of base = triangle  
 $B = \frac{1}{2} 8 \cdot 4.3$   
 Volume =  $B \cdot H$   
 $V = \frac{1}{2} \cdot 8 \cdot 4.3 \cdot 7$  **V = 120.4 km<sup>3</sup>**

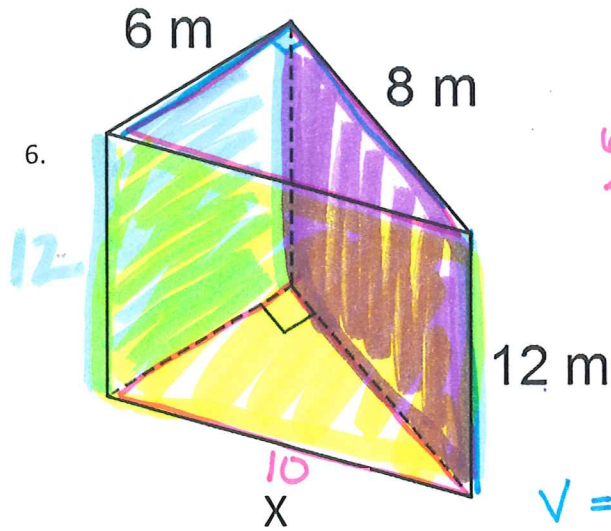


SA = 108 cm<sup>2</sup>  
 V = 72 cm<sup>3</sup>

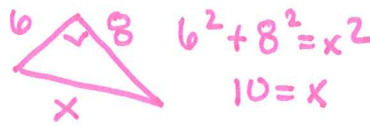


Surface Area  
 $SA = 2(2 \cdot 7) + 2(6 \cdot 7) + 2(2 \cdot 6)$   
**SA = 136 cm<sup>2</sup>**

Volume =  $B \cdot H$   
 $V = 6 \cdot 7 \cdot 2$  **V = 84 cm<sup>3</sup>**



Find x



$$6^2 + 8^2 = x^2$$

$$10 = x$$

area of base

$$B = \frac{1}{2} 6 \cdot 8$$

$$H = 12$$

Volume = B · H

$$V = \frac{1}{2} 6 \cdot 8 \cdot 12$$

$$V = 288 \text{ m}^3$$

Surface Area

$$2 \cdot \frac{1}{2} \cdot 6 \cdot 8$$

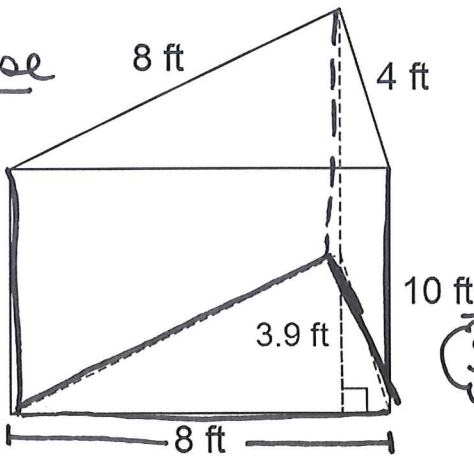
$$+ 10 \cdot 12$$

$$+ 6 \cdot 12$$

$$+ 8 \cdot 12$$

$$SA = 336 \text{ m}^2$$

7.  
Area of base  
 $B = \frac{1}{2} 8 \cdot 3.9$



Surface Area:

$$2 \left( \frac{1}{2} 8 \cdot 3.9 \right)$$

$$+ 4 \cdot 10$$

$$+ 8 \cdot 10$$

$$+ 8 \cdot 10$$

$$SA = 231.2 \text{ ft}^2$$

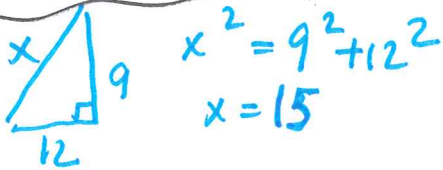
Volume = B · H

$$B = \frac{1}{2} 8 \cdot 3.9$$

$$H = 10$$

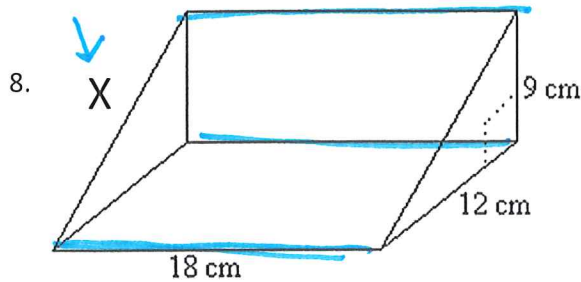
$$V = \frac{1}{2} 8 \cdot 3.9 \cdot 10$$

$$V = 156 \text{ ft}^3$$



$$x^2 = 9^2 + 12^2$$

$$x = 15$$



Surface Area

$$2 \cdot \frac{1}{2} \cdot 9 \cdot 12$$

$$+ 9 \cdot 18$$

$$+ 12 \cdot 18$$

$$15 \cdot 18$$

$$SA = 756 \text{ cm}^2$$

Area of base

$$B = \frac{1}{2} 9 \cdot 12$$

Volume = B · H

$$B = \frac{1}{2} 9 \cdot 12$$

$$H = 18$$

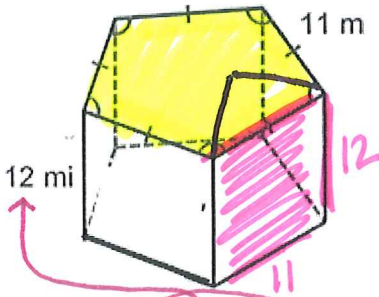
$$V = \frac{1}{2} 9 \cdot 12 \cdot 18$$

$$V = 972 \text{ cm}^3$$

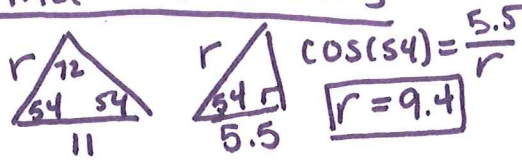
Individual Practice/Review Interesting Bases

Directions: Find the surface area and volume for the following prism.

1. a.)



Find the radius:



SA = 1080 mi<sup>2</sup>

V = 2521.1 m<sup>3</sup>

Area of the base: pentagon

$B = n \cdot \frac{1}{2} \cdot ab \sin \theta$   
 $n = 5$   
 $\theta = 72^\circ$   
 $a = 9.4$   
 $b = 9.4$

Surface Area  
 $2 \cdot 5 \cdot \frac{1}{2} \cdot 9.4 \cdot 9.4 \sin(72)$   
 $+ 5(12 \cdot 11)$

SA = 1080 mi<sup>2</sup>

Volume = B · H H = 12 → B = 5 · 1/2 · 9.4 · 9.4 sin(72)

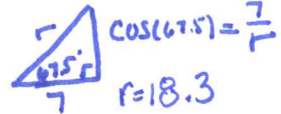
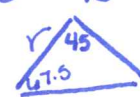
V = 5 · 1/2 · 9.4 · 9.4 sin(72) · 12

V = 2521.1 m<sup>3</sup>

Area of base n = 8 θ = 45° a = 18.3 b = 18.3

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

B = 8 · 1/2 · 18.3 · 18.3 sin(45)



Volume = B · H H = 15

V = 8 · 1/2 · 18.3 · 18.3 sin(45) · 15

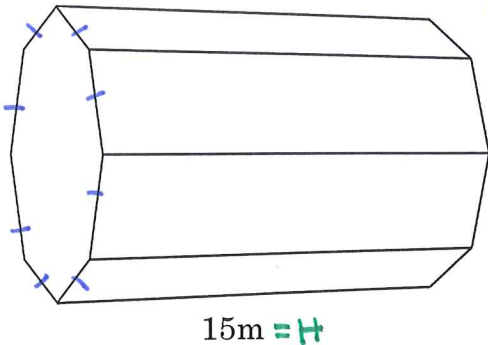
V ≈ 14208.2 m<sup>3</sup>

Surface Area

$2(8 \cdot \frac{1}{2} \cdot 18.3 \cdot 18.3 \sin(45))$   
 $+ 8(14 \cdot 15)$

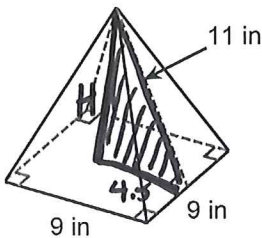
SA ≈ 3574.4 m<sup>2</sup>

1. b.)



Directions: Find the surface area and volume for the following pyramids.

2. a.)



Find H

$4.5^2 + H^2 = 11^2$   
 $H = \sqrt{100.75}$   
 $H = 10.0$

Volume = 1/3 B · H

B = 9 · 9 H = 10

V = 1/3 · 9 · 9 · 10

V = 270 in<sup>3</sup>

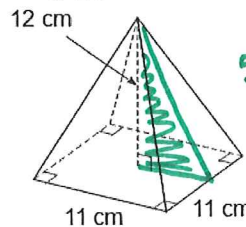
Surface Area

+ 9 · 9 ← base

+ 4 · 1/2 · 9 · 11 ← 4 Δ

SA = 279 in<sup>2</sup> V = 270 in<sup>3</sup>

b.)



Find l  
 $5.5^2 + 12^2 = l^2$   
 $\sqrt{174.25} = l$   
 $13.2 = l$

Surface Area

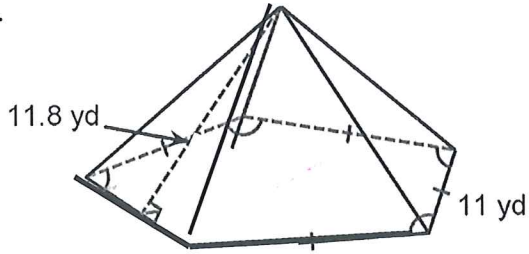
$11 \cdot 11$   
 $+ 4 \cdot \frac{1}{2} \cdot 11 \cdot 13.2$   
 $411.4 \text{ cm}^2$

V = 1/3 B · H  
 $B = 11 \cdot 11$   
 $H = 12$   
 $V = 1/3 \cdot 11 \cdot 11 \cdot 12$

SA = 411.4 cm<sup>2</sup> V = 484 cm<sup>3</sup>

Directions: Find the surface area for the following pyramid.

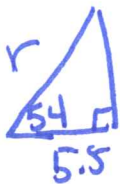
3.



$$SA = \underline{534.6 \text{ yd}^2}$$

Area of Pentagon Base

$$B = n \cdot \frac{1}{2} ab \sin \theta \quad n=5$$



$$\cos(54) = \frac{5.5}{r}$$

$$r = 9.4$$

$$\theta = 72^\circ$$

$$a = 9.4$$

$$b = 9.4$$

$$SA = 5 \cdot \frac{1}{2} \cdot 9.4 \cdot 9.4 \sin(72)$$

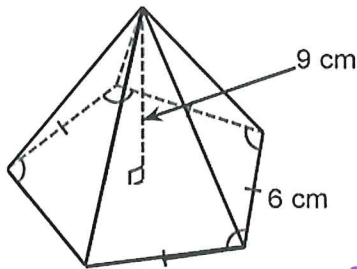
$$+ 5 \cdot \frac{1}{2} \cdot 11 \cdot 11.8$$

$$SA = \underline{534.6 \text{ yd}^2}$$

$$B = 5 \cdot \frac{1}{2} \cdot 9.4 \cdot 9.4 \sin(72)$$

Directions: Find the volume for the following pyramid.

4.



Area of Base



$$\cos(54) = \frac{3}{r}$$

$$r = 5.1$$

$$B = 5 \cdot \frac{1}{2} \cdot 5.1 \cdot 5.1 \sin(72)$$

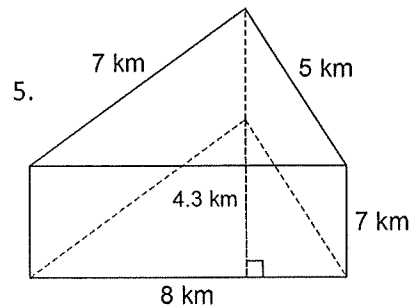
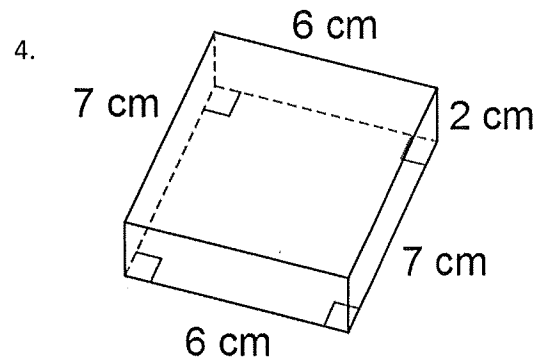
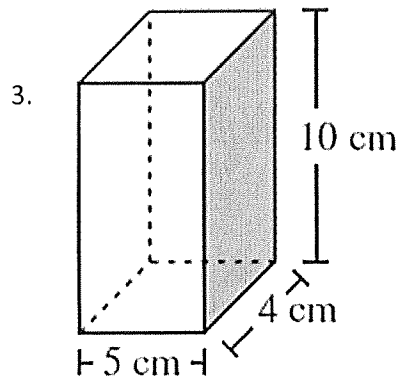
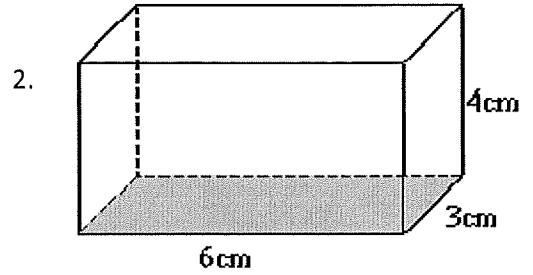
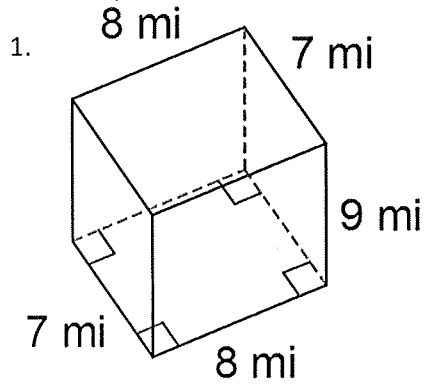
$$V = \underline{185.5 \text{ cm}^3}$$

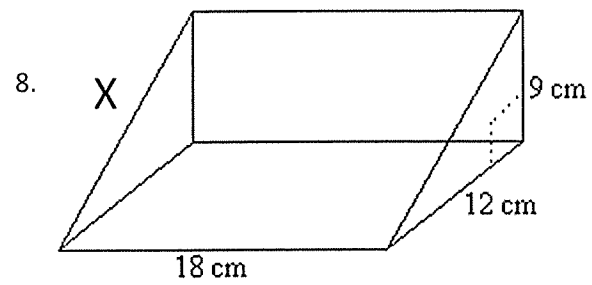
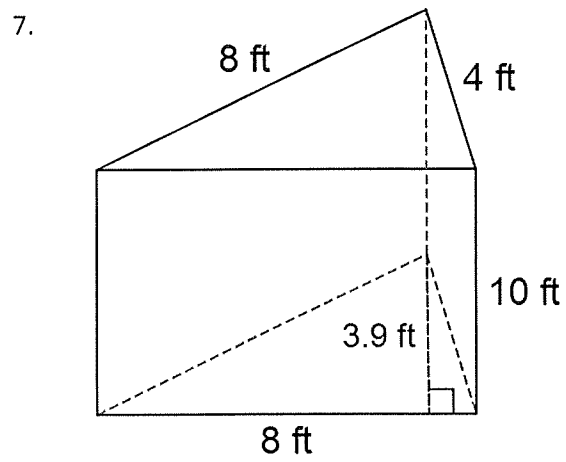
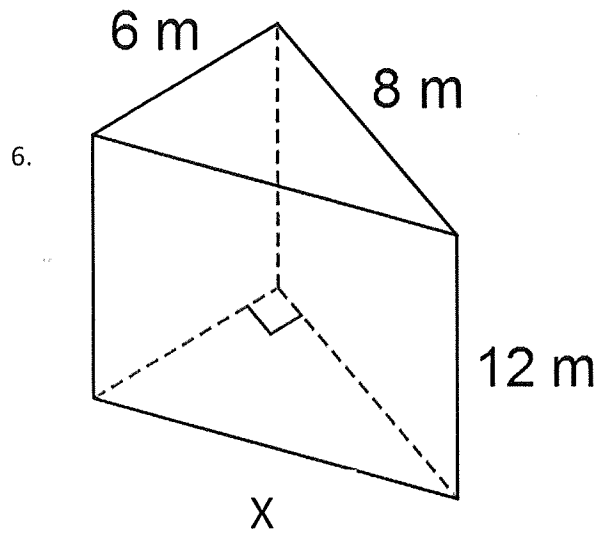
$$V = \frac{1}{3} \cdot 5 \cdot \frac{1}{2} \cdot 5.1 \cdot 5.1 \sin(72) \cdot 9$$

Name: \_\_\_\_\_

SA and Volume Warm-Up/Reteach Prisms

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

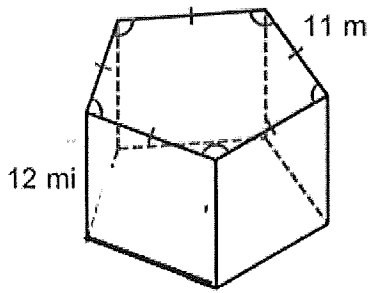




Individual Practice/Review Interesting Bases

Directions: Find the surface area and volume for the following prism.

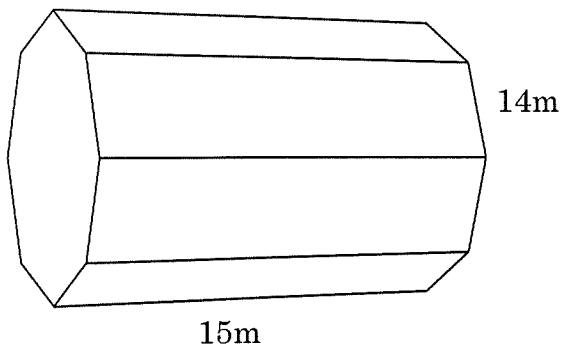
1. a.)



SA= \_\_\_\_\_

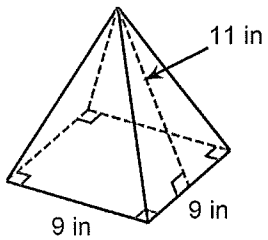
V= \_\_\_\_\_

1. b.)

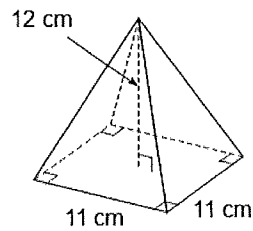


Directions: Find the surface area and volume for the following pyramids.

2.a)



b)

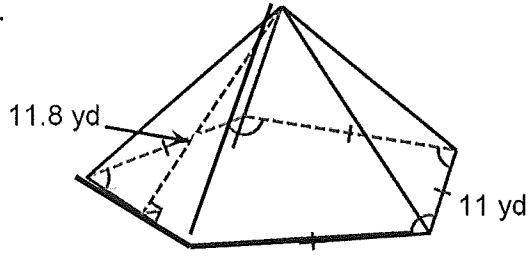


SA= \_\_\_\_\_ V= \_\_\_\_\_

SA= \_\_\_\_\_ V= \_\_\_\_\_

Directions: Find the surface area for the following pyramid.

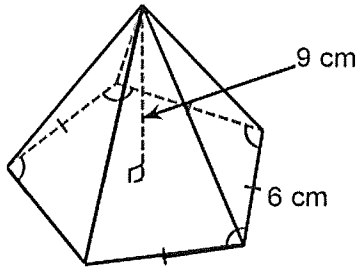
3.



SA= \_\_\_\_\_

Directions: Find the volume for the following pyramid.

4.



V= \_\_\_\_\_