Name: _____ Date: _____ Hour: _____

To study for my "Interesting Bases QUIZ" I did the following: _____

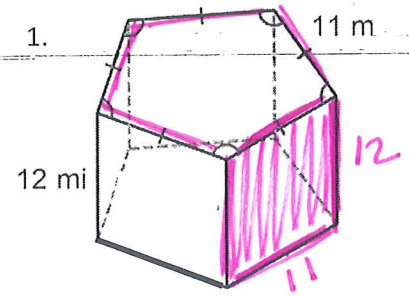
_____

_____

It is your responsibility to retake the Interesting Bases Quiz if you need to. Do this in a timely fashion. I am here after school on Tuesday. You MUST make corrections on your quiz before the retake.

Interesting Bases Intervention:

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

1. 

SA = 2 pentagons + 5 Rectangles

11×12, 12, 11

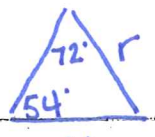
$SA = 2 \cdot 5\frac{1}{2}(9.4)^2 \sin(72) + 5(11 \times 12)$

$SA = 1080.2 m^2$

SA= $1080.2 m^2$

Pentagon

$B = 5\frac{1}{2} r r \sin\theta$ → $B = 5\frac{1}{2}(9.4)^2 \sin(72)$ area of Base



$\frac{\sin(72)}{11} = \frac{\sin(54)}{r}$

$r \sin(72) = 11 \sin(54)$

$\frac{r \sin(72)}{\sin(72)} = \frac{11 \sin(54)}{\sin(72)}$

$r = 9.4$

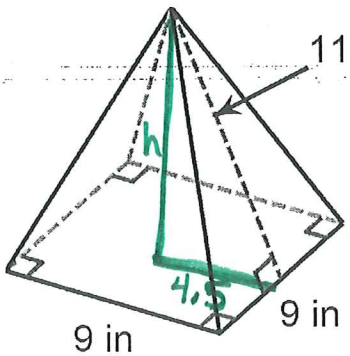
$V = B \cdot H$ (H = 12)

$V = \left(5\frac{1}{2} 9.4^2 \sin(72)\right) \times 12$

$V = 2,521.1 m^3$

V= $2,521.1 m^3$

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

2. 

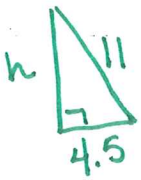
SA = 4 triangles + 1 square

$SA = 4(\frac{1}{2} 9 \times 11) + 9 \times 9$

$SA = 279 in^2$

SA= $279 in^2$

$\frac{1}{2} 9 \times 11$



$h^2 + 4.5^2 = 11^2$

$h = 10.0$

Area Base

$B = 9 \times 9$

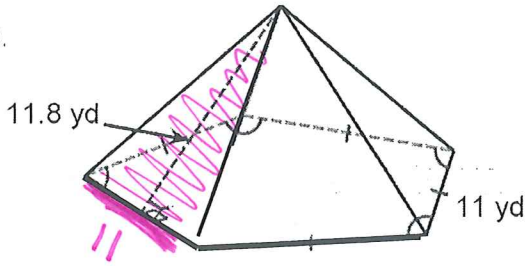
$V = \frac{1}{3} BH$

$V = \frac{1}{3} 9 \times 9 \cdot 10$

V= $270 in^3$

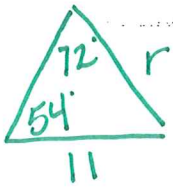
Directions: Find the surface area for the following pyramid.

3.



SA= _____

Pentagon



$\frac{\sin 72}{11} = \frac{\sin 54}{r}$

$r = 9.4$

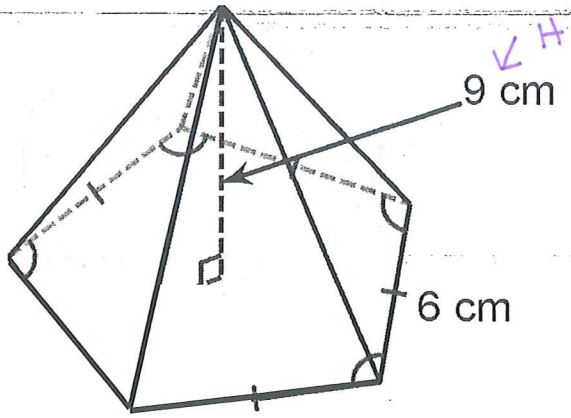
SA = 1 pentagon + 5 △

$= 5\frac{1}{2}(9.4)^2 \sin(72) + 5\left(\frac{1}{2} 11 \times 11.8\right)$

$SA = 534.6\ yd^2$

Directions: Find the volume for the following pyramid.

4.



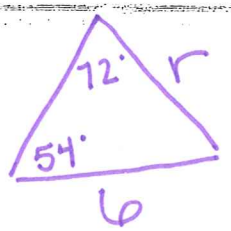
V= _____

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

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

$V = 185.5\ cm^3$

Area of Base



$\frac{\sin(72)}{6} = \frac{\sin 54}{r}$

$r = 5.1\ cm$

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