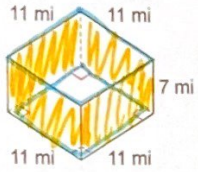
ACC Geometry Notes Name Key w/ work ID: 1

SA and Volume of Prisms Examples

Date _____ Period ____

Find the surface area of each figure. Round your answers to the nearest hundredth, if necessary.

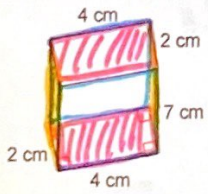
1)



$4 \times (11 \cdot 7) + 2 \times (11 \cdot 11)$

$SA = 550 \text{ mi}^2$

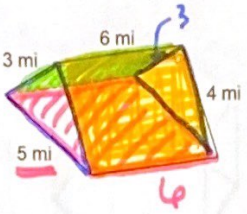
2)



$2 \times (2 \times 7) + 2 \times (4 \times 2) + 2 \times (4 \times 7)$

$SA = 100 \text{ cm}^2$

3)



Bases 2 RT Δs $2 \times \frac{1}{2} \cdot 3 \cdot 4$

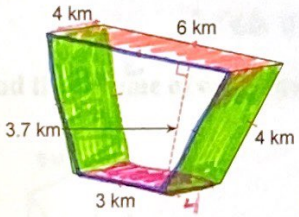
$1 \times 3 \times 6 \rightarrow 6 \cdot 3$ +

$1 \times 5 \times 6 \rightarrow 6 \cdot 5$ +

$1 \times 6 \times 4 \rightarrow 6 \cdot 4$

SA = 84 mi²

4)



3×4 +

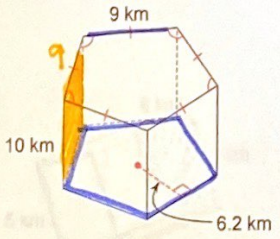
6×4 +

$2 \times 4 \times 4 \rightarrow 2(4 \times 4)$ +

2 Trapezoid bases $2\left(\frac{1}{2}(3+6)3.7\right)$

SA = 101.3 km²

5)

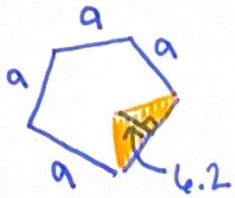


Area of the 2 Pentagon bases

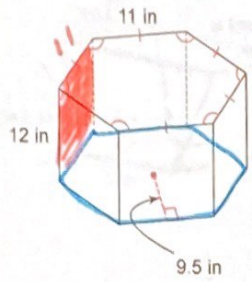
$2\left[5\left(\frac{1}{2} 9 \times 6.2\right)\right]$ +

$5 \times 9 \times 10 \rightarrow 5(9 \times 10)$

SA = 729 km²



6)



Area of TWO hexagon bases

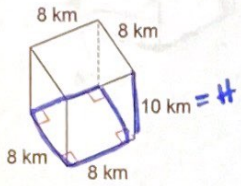
$2\left[6\left(\frac{1}{2}11 \cdot 9.5\right)\right] + 6(11 \times 12)$

$SA = 1419 \text{ in}^2$

Area of base x Height

Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.

7)



Area of base = 8×8

height connects the two bases = 10

$V = (8 \times 8) \cdot 10$

$V = 640 \text{ km}^3$

8)

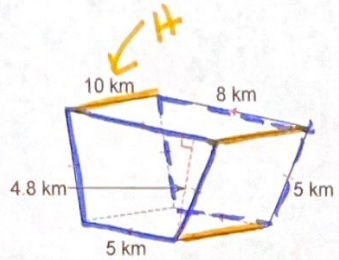
Area of base = 8×5

height connects 2 bases = 6

$V = (8 \times 5)6$

$V = 240 \text{ km}^3$

9)



Area of trapezoid base

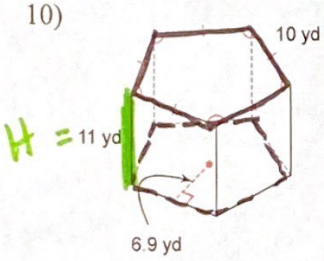
Area of base = $\frac{1}{2}(8+5)4.8$

height that connects the two trapezoid bases = 10

$V = \frac{1}{2}(8+5)4.8 \times 10$

$V = 312 \text{ km}^3$

10)



Area of a pentagon base

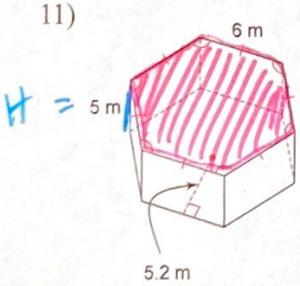
$5\left(\frac{1}{2} 10 \cdot 6.9\right)$

height that connects the two bases = 11

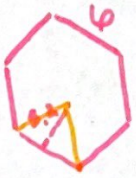
$V = 5\left(\frac{1}{2} \cdot 10 \cdot 6.9\right) \times 11$

$V = 1897.5 \text{ yd}^3$

11)



Area of hexagon base



$6\left(\frac{1}{2} \cdot 6 \cdot 5.2\right)$

height that connects the two bases = 5

$V = 6\left(\frac{1}{2} \cdot 6 \cdot 5.2\right) \times 5$

$V = 468 \text{ m}^3$