Name: Key Per: 3/8 Date: _____

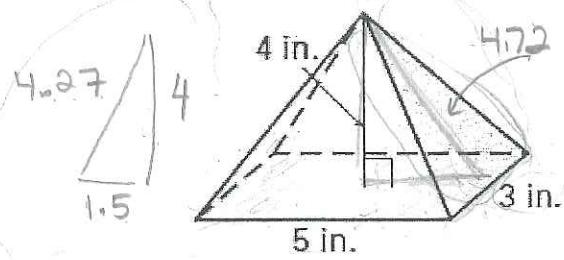
Serafino • Geometry

12.2 SA & Volume of Pyramids & Cones

Classwork / Homework

1. Name Rectangular Pyramid

V: 20 u^3 SA: $\approx$ 50.56



V: $\frac{1}{3} B \cdot h$

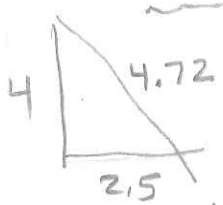
$V = (\frac{1}{3} 15) 4$

$(5) 4$

$r = 20$

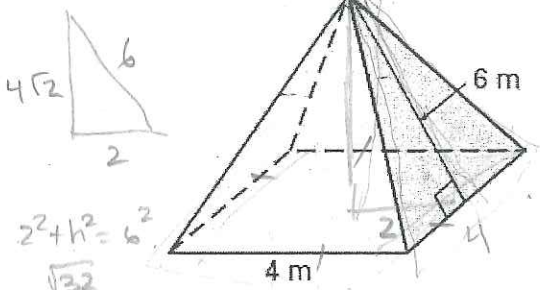
SA: base + 2(f/b) + 2(sides)

$15 + 2(10.7) + 2(7.08)$



2. Name Squere Pyramid

V: $\frac{64\sqrt{2}}{3}$ m^3 ≈ 30.17 SA: 64 m^2



$2^2 + h^2 = 6^2$

$\sqrt{32}$

$4\sqrt{2}$

V: $\frac{1}{3} 4^2 \cdot 4\sqrt{2}$

$\frac{1}{3} \cdot 16 \cdot 4\sqrt{2}$

$\frac{64\sqrt{2}}{3}$

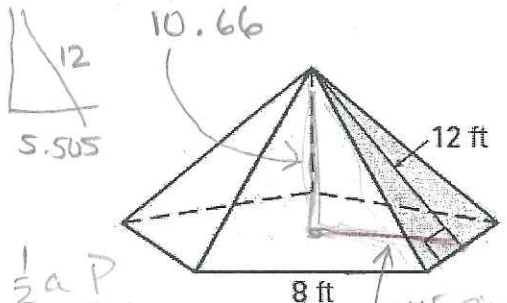
SA: B + 4Δ's

$16 + 4(4 \cdot 6 \cdot \frac{1}{2})$

$16 + 48$

3. Name Pentagonal Pyramid.

V: 391.22 ft^3 SA: 350.1 ft^2



V: $\frac{1}{3} B \cdot h$

$(\frac{1}{3}) B \cdot (10.66)$

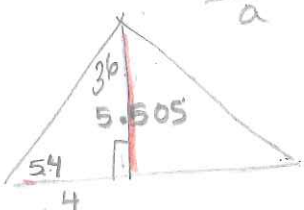
$\frac{1}{3}(\frac{1}{2} \cdot 5.505 \cdot 40)(10.66)$ (a, P)

SA: Base + 5Δ

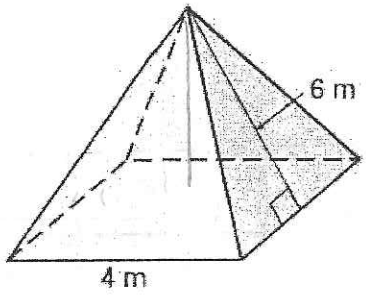
$110.1 + 5(\frac{1}{2} 8\ 12)$

$A = \frac{1}{2} a P$

5.505 $\frac{\sin 54}{a} = \frac{\sin 36}{4}$

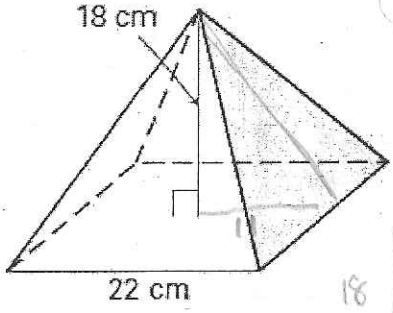


4. Name _____ V: _____ SA: _____



same as #2 ~~

5. Name square pyramid V: 2904 u^3 SA: $484 + 44\sqrt{445} \approx 1412.18$

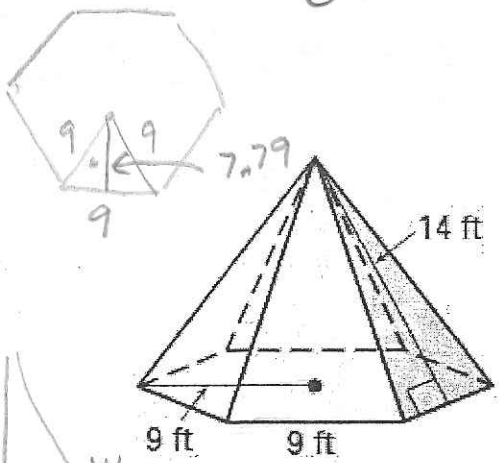


V: $\frac{1}{3}(484)(18)$

SA: $(484) + 4\left(\frac{1}{2}22 \cdot \sqrt{445}\right)$

18, 11, ℓ $121 + 324$ 445

6. Name hexagonal pyramid V: 815.56 SA: 588.33



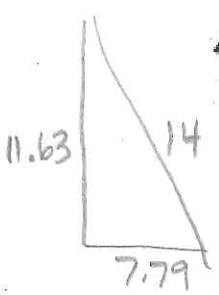
V: $\frac{1}{3} A_b \cdot h$

$\frac{1}{3}\left[\frac{1}{2} 7.79 \cdot 54\right] h$

$\frac{1}{3}(210.33)\,11.63$

SA: $B + 6\Delta$'s

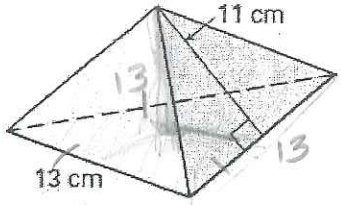
$210.33 + 6\left(\frac{1}{2} 9 \cdot 14\right)$



11
3.752

7. Name equilateral triangle pyramid

V: 252.227 cm^3 SA: 287.68



V: $\frac{1}{3} A_b \cdot h$

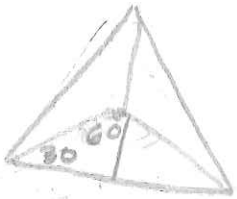
$\frac{1}{3} \cdot \Delta \cdot h$

$\frac{1}{3}(73.18)10.34$

SA: $B + 3\Delta$

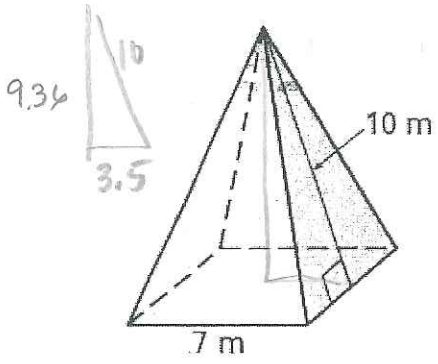
$73.18 + 3(\frac{1}{2} 13 \cdot 11)$

$73.18 + 3(71.5)$



8. Name square pyramid

V: 152.994 SA: 189 m^2



V: $\frac{1}{3} B h$

$\frac{1}{3} \cdot 49 \cdot 9.367$

SA: $49 + 4(7 \cdot 10 \cdot \frac{1}{2})$

9. Name cone

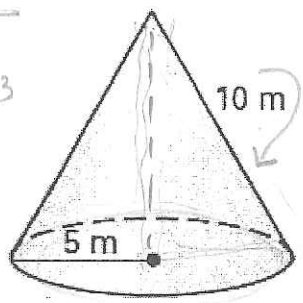
V: $\frac{125\pi\sqrt{3}}{3} \approx 226.72$ SA: $75\pi \approx 235.619$

$5^2 + h^2 = 10^2$

$h = \sqrt{75}$

$25 \cdot 3$

$5\sqrt{3}$



V: $\frac{1}{3} B \cdot h$

$\frac{1}{3}(25\pi)(5\sqrt{3})$

$\frac{125\pi\sqrt{3}}{3}$

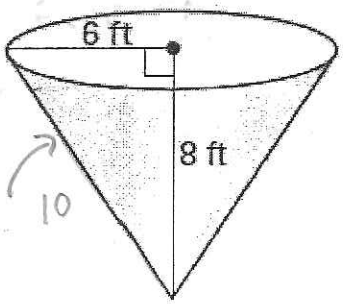
SA: $B + \frac{1}{2} C l$

$25\pi + \frac{1}{2} 10\pi \cdot 10$

$25\pi + 50\pi$

10. Name cone

V: $96\pi \approx 301.59$ SA: $96\pi \approx 301.59$



V: $\frac{1}{3} B h$

$\frac{1}{3} 36\pi \cdot 8$

$= 96\pi$

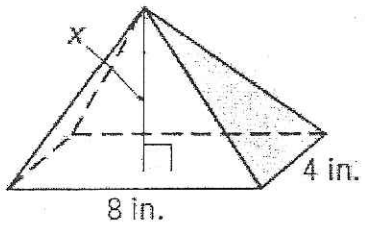
SA: $B + \frac{1}{2} Cl$

$36\pi + \frac{1}{2} 12\pi \cdot 10$

$36\pi + 60\pi$

$= 96\pi$

11. Name rectangular pyramid V = 64 in³ x = 6



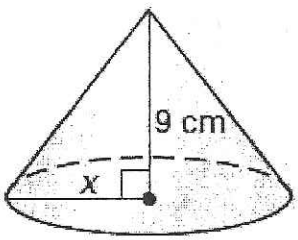
V: $\frac{1}{3} B h$

$64 = \frac{1}{3} 32 \cdot x$

$192 = 32x$

$6 = x$

12. Name cone V = 147 π in³ x = 7



V: $\frac{1}{3} B h$

$147\pi = \frac{1}{3} x^2 \pi \cdot 9$

$\frac{147}{3} = \frac{3x^2}{3}$

$49 = x^2$

$x = 7$