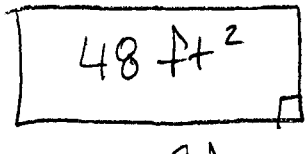
Geometry Weds. 4-3-13 CLASS NOTES

(13) $V = ?$ Rect. pyramid $V = \frac{1}{3} B h$

B = Area of base

$B = ?$ $A = bh$



$V = \frac{1}{3}(48)10 = 160 ft^3$

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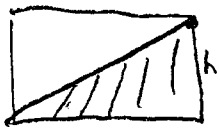
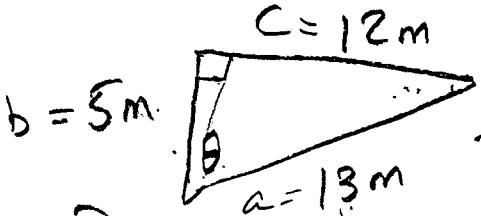
(14) $V = ?$ triangular pyramid $V = \frac{1}{3} B h$

B = Area Δ

$h = 9m$



$A_\Delta = \frac{1}{2} b h$



$\frac{P}{2} = \frac{30}{2} = 15 = s$ = semi perimeter

SSS Heron's Form.

$* A = \sqrt{s(s-a)(s-b)(s-c)}$

$= \sqrt{15(2)(10)(3)}$

$= \sqrt{900} = 30 m^2 = B$

$V = \frac{1}{3}(30)9 = 90 m^3 = V$

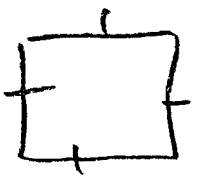
$B \quad h$

SAS

$* A = \frac{1}{2} ab \sin\theta$

ex $= \frac{1}{2}(5)(13)\sin\theta$

(16) Sq. Pyramid $V = \frac{1}{3}Bh$



Area = $B = 45^2$

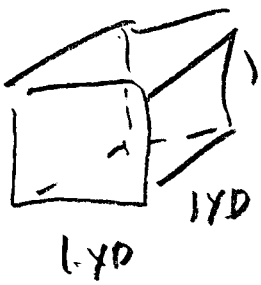
$B = 2025 ft^2$

$h = 5 yds = 15 ft$

$V = \frac{1}{3}(2025)15$

$V = 10125 ft^3$

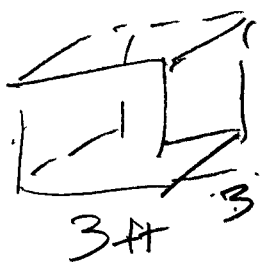
45
×45
225
180
2025



$= 1 YD^3$

$V = \frac{10125}{27}$

$V = \frac{1125}{3}$



$= 27 ft^3$

$V = 375 YD^3$

(19) Cone, $V = ?$ $\quad V = \frac{1}{3} B h$

$B = \pi r^2$

h = twice the radius $\quad B = 36\pi \text{ ft}^2$

$A_\odot = \pi r^2 = 36\pi$

$r = 6 \quad \therefore h = 12$

$V = \frac{1}{3}(36\pi)12$

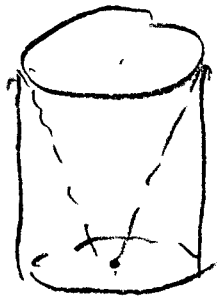
$V = 144\pi \text{ ft}^3$ EXACT

$V \approx 144(3.1416) \approx 452.389$

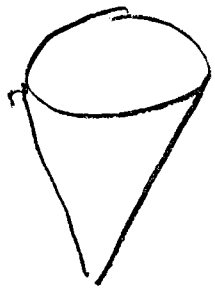
$V \approx 452.4 \text{ ft}^3$

Approx.

(22)



$r = 6$ ft
$h = 10$ ft



$V = Bh$

$= (\pi r^2)h$

$= (36\pi)10$

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

$= \frac{1}{3}(\pi r^2)h$

$\frac{1}{3}(36\pi)10$

$V_{RESULT} = 360\pi - 120\pi$

$V = 240\pi \text{ ft}^3$ EXACT

$V = 240(3.1416) = 753.982$

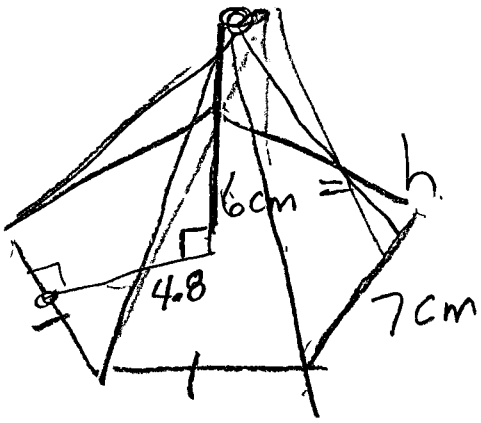
$V \approx 754.0 \text{ ft}^3$ APPROX.

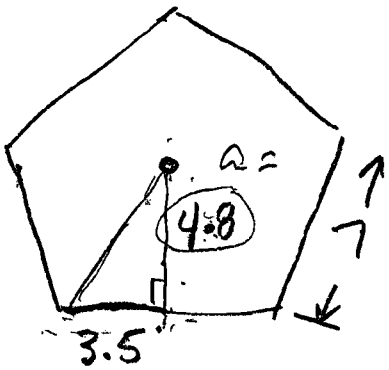
Worksheet Practice

REGULAR PENTAGONAL PYRAMID $V = \frac{1}{3}Bh$

#2

$h = 6\text{cm}$





$a = 4.8$

$P = 35$

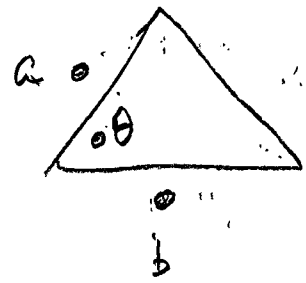
$B_{area} = \frac{1}{2}aP$

$= \frac{1}{2}(4.8)35$

$B = 84\text{ cm}^2$

$$V = \frac{1}{3}(84)(6) = 168\text{ cm}^3$$

SAS

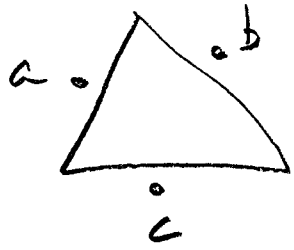


$$A = \frac{1}{2}ab\sin\theta$$

SSS

$$P = a+b+c$$

$$s = \frac{a+b+c}{2}$$

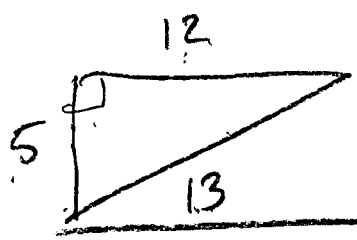


Heron's Formula

$$A = \sqrt{s(s-a)(s-b)(s-c)}$$

ACT
3, 4, 5
5, 12, 13
8, 15, 17

Ex



$A = \frac{1}{2}bh = 30$

$P = 30$

$s = 15$

$$A = \sqrt{15(2)(10)(3)}$$

$$A = \sqrt{900}$$

$$A = 30$$