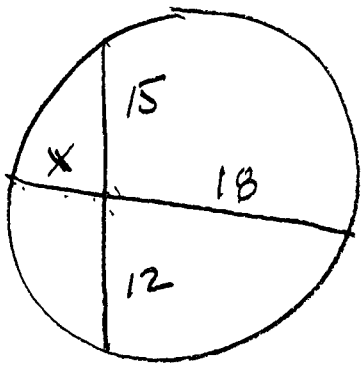
Geometry Fri. 5-17-13 Class Notes

(105)



$x = ?$

$$\frac{18x}{18} = \frac{\cancel{12}^{2} \cdot \cancel{15}^{5}}{\cancel{18}_{\cancel{3}_{1}}}$$

$x = 10$

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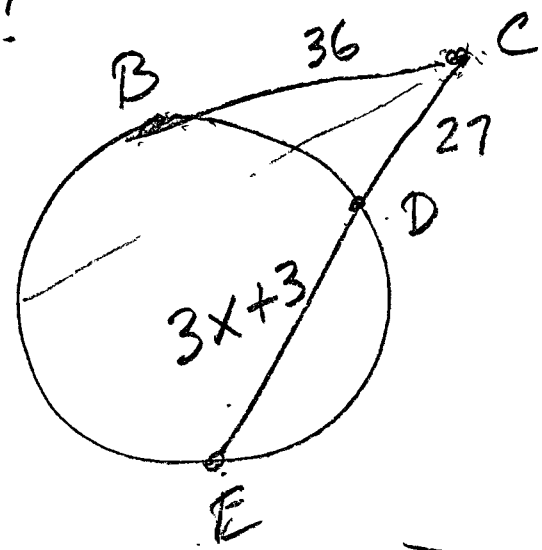
(109) $\overline{DE} = ?$



$$\begin{array}{r} 36 \\ \times\ 36 \\ \hline 216 \\ 108 \\ \hline 1296 \end{array}$$

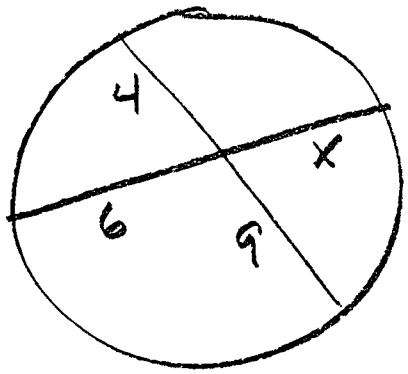
$$27\left[(3x+3)+27\right] = 36$$

$$\cancel{27}\left[3x+30\right] = \frac{1296}{27} = \frac{144}{3} = 48$$

$$3x = 48 - 30 = 18$$

$x = 6$ $\therefore$ $\overline{DE} = 3(6)+3 = \boxed{21}$

(106) $x = ?$



$4 \cdot 9 = 6 \cdot x$

$\boxed{16 = x}$

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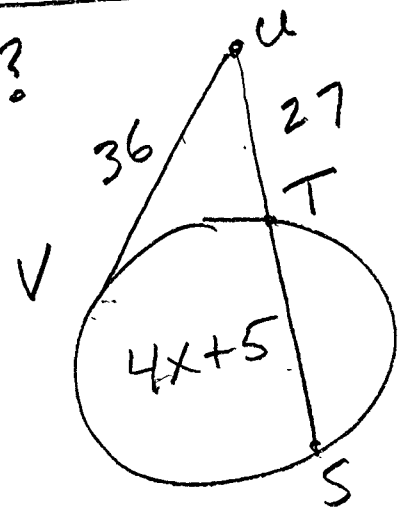
(110) $\overline{US} = ?$



36
36
216
108
1296

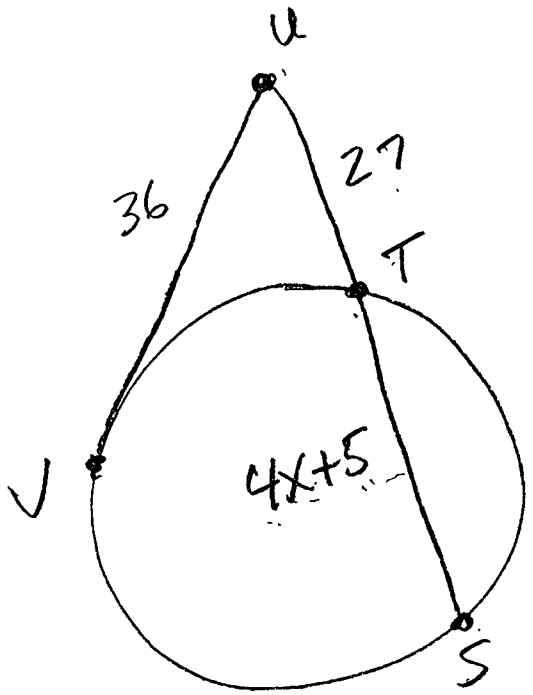
$$\frac{27}{27}\left[(4x+5)+27\right] = \frac{36^2}{27}$$

$$4x + 32 = \frac{1296}{27} = \frac{144}{3} = 48$$

$$4x = 16 \quad \therefore \boxed{x = 4}$$

$$US \Rightarrow 4(4)+5+27 = \boxed{48}$$

(10)



$US = ?$

$$27\left[(4x+5)+27\right] = 36^2$$

$$4x + 32 = \frac{1296}{27} = 48$$
$$-32 \qquad\qquad\qquad -32$$

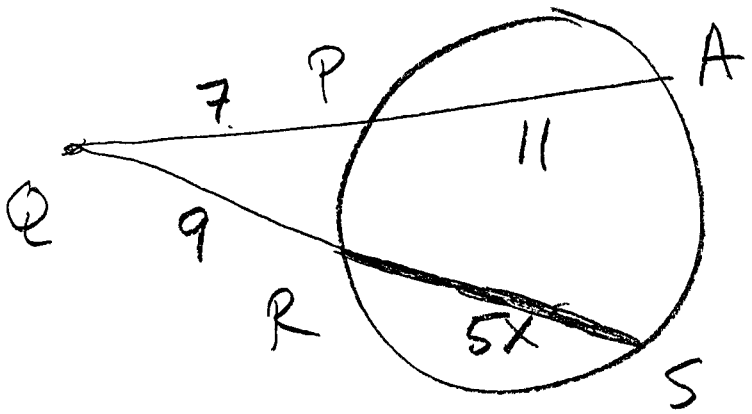
$$4x = 16$$

$$x = 4$$

$\therefore US = 4(4)+5+27$

$$US = 48$$

(113) $\overline{SR} = ?$



$$7(11+7) = 9(9+5x)$$

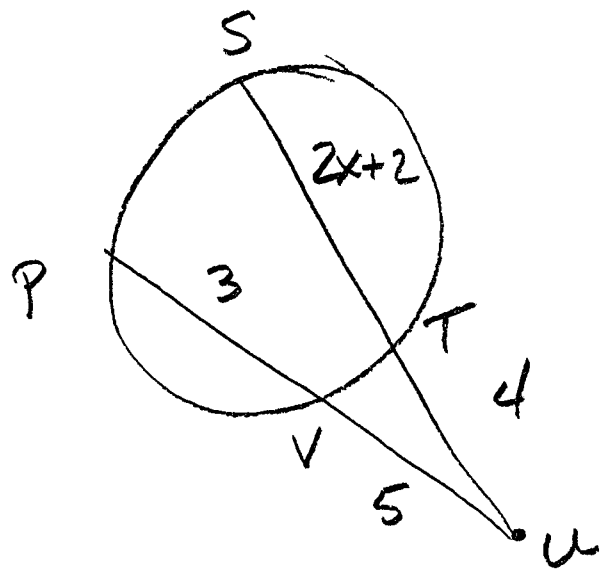
$$77+49 = 81+45x$$

$$\frac{45}{45} = \frac{126-81}{45} = \frac{45x}{45}$$

$$1 = x$$

$$\therefore \boxed{5R = 5}$$

(14)



$\overline{SU} = ?$

$$4\left[(2x+2)+4\right] = 5\left[3+5\right]$$

$$4(2x+6) = 40$$

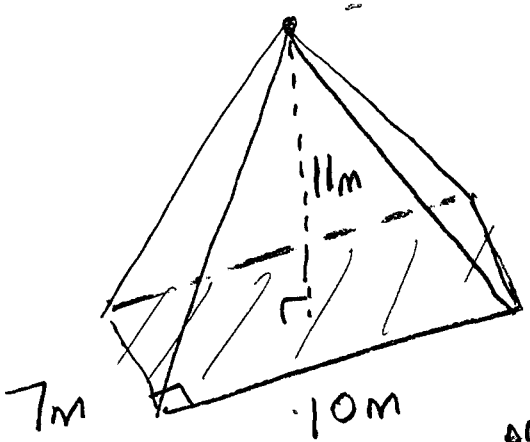
$$2x+6 = 10$$

$$2x = 4$$

$$x = 2$$

$$\therefore \overline{SU} = 2(2)+2+4 = \boxed{10}$$

(132)



$V = ?$

Nearest $\frac{V}{10}$

$V = \frac{1}{3}Bh$ ← area of base

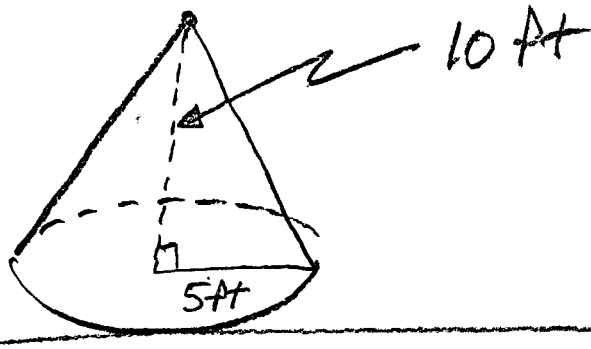
$= \frac{1}{3}(7 \cdot 10)11$

$= \frac{1}{3}(70)11$

$V = \frac{770}{3} = 256.6\overline{6}$

$V = 256.7\,m^3$

(138) $V = ?$



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

$$= \frac{1}{3}(\pi 5^2)10$$

$$V = \boxed{\frac{250}{3}\pi \text{ ft}^3} \quad \text{EXACT}$$

$$\approx (83.3)(3.14) \approx 261.8 \text{ ft}^3$$

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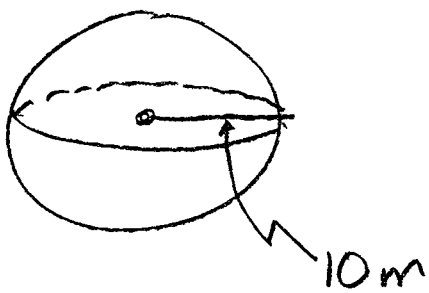
(142) $V = ?$



$$V = \frac{4}{3}\pi r^3 = \frac{4}{3}\pi(10^3)$$

$$= \boxed{\frac{4000}{3}\pi \text{ m}^3}$$

$$\approx 1333.3\pi \text{ m}^3$$

(139) $V = ?$

(EXACT)

$\pi = \pi$

$V = \frac{4}{3}\pi r^3$

$= \frac{4}{3} \cdot \frac{\pi}{1} \cdot (9.2)(9.2)(9.2)$

$=$

9.2
9.2
184
828
8464
9.2
16928
75576
778.688
× 4

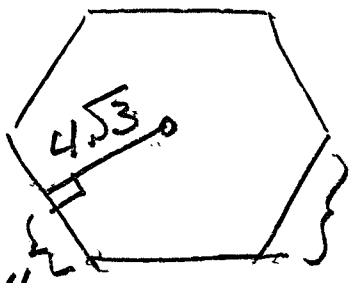
3 | 3 1 . 1 4 . 7 5 2

1038.21

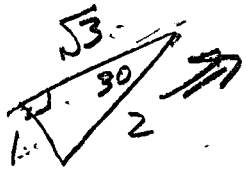
$V = 1038.2\pi \text{ ft}^3$

3

(155) $A = ?$



$\therefore P = 48$

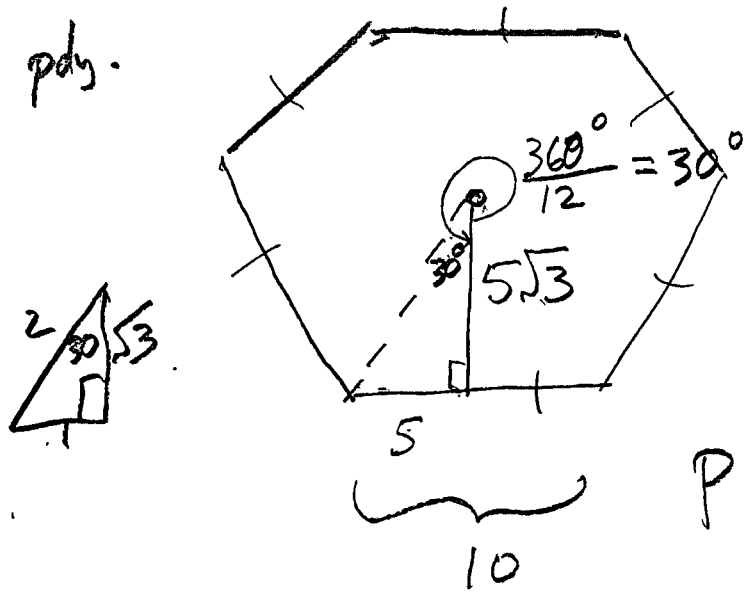


$$A = \frac{1}{2}(4\sqrt{3})\,48^{24}$$

$$A = 96\sqrt{3} \text{ units}^2$$

(156) $A = ?$

Reg. pdy.



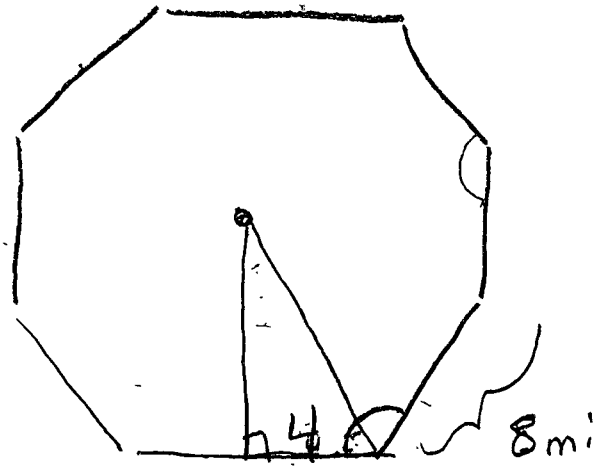
$P = 60$

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

$$A = \frac{1}{2}\left(5\sqrt{3}\right)\cancel{60}^{30}$$

$$A = 150\sqrt{3} \text{ units}^2$$

(157) A = ?

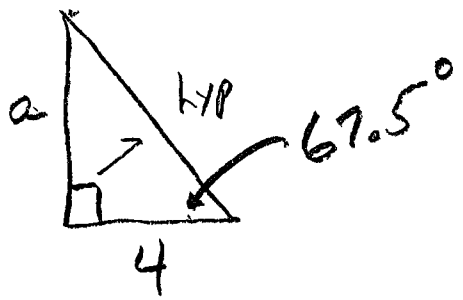


$(8-2)180$

$6(180)$

$\frac{1080}{8} = 135°$

$P = 64$ mi



$\tan 67.5° = \frac{a}{4}$

$4(2.4142) = a$

$9.6569 = a$

$A = \frac{1}{2}(9.6569)\cancel{64}^{32}$

$A = 309.0 \text{ mi}^2$