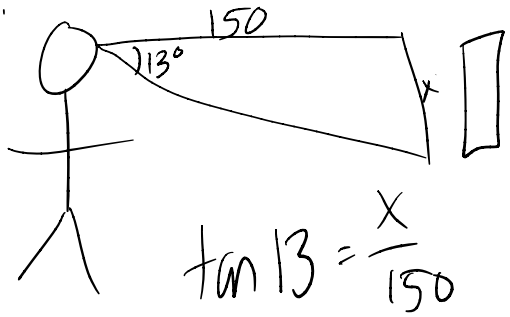
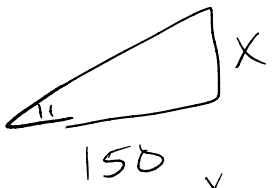
1.





$\tan 13 = \frac{x}{150}$

$x = 34.63\text{ cm}$

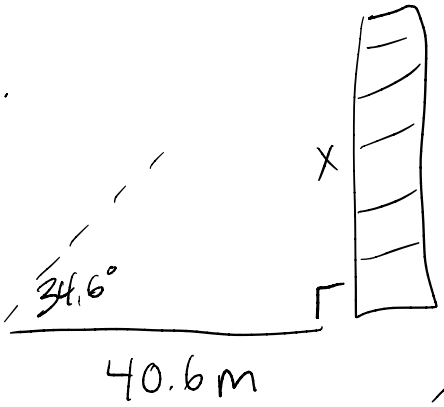
$\tan 11 = \frac{x}{150}$

$x = 29.16\text{ cm}$

$+ 34.63$

63.79 cm

2.



$\tan 34.6 = \frac{x}{40.6}$

28 m

3. $\langle -2, 3\rangle + \langle 12, -18\rangle$

$\langle 10, -15\rangle$

4. $(-2)(4) + (3)(-6)$

$-8 + -18$

-26

5. $\langle 4, -6\rangle$

$\frac{4}{\sqrt{4^2+(-6)^2}}, \frac{-6}{\sqrt{4^2+(-6)^2}}$

$\frac{4}{\sqrt{52}}, \frac{-6}{\sqrt{52}}$

5. $\cos\theta = \frac{-26}{\sqrt{13}\cdot\sqrt{52}}$

$\sqrt{(-2)^2+(3)^2} = \sqrt{13}$

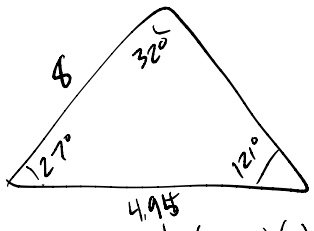
$\sqrt{4^2+(-6)^2} = \sqrt{52}$

$\frac{-26}{26} = -1$

$\cos^{-1}(-1) = 180$

$\theta = 180$

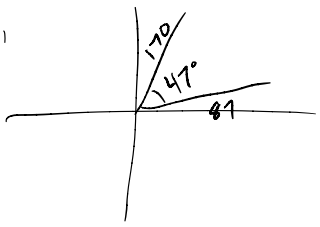
7.



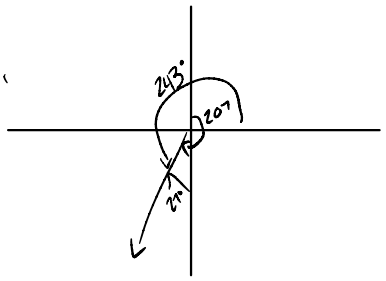
$\frac{8}{\sin 121} = \frac{x}{\sin 32}$

area $= \frac{1}{2}(4.95)(8)\sin 27$

8.

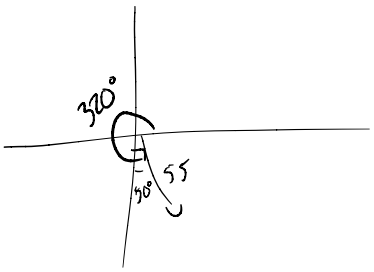


9.



$480\cos 243 + 480\sin 243$

$-217.9i + -427.68j$



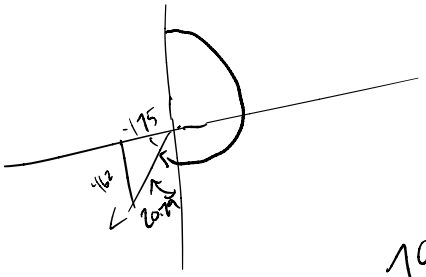
$55\cos 320 + 55\sin 320$

$42.13i + -35.35j$

$-175.77i + -463.03j$

$\sqrt{(175.77)^2 + (463.03)^2}$

495.27



$\tan\alpha = \frac{-463.03}{-175.77}$

$\tan\alpha = 2.63$

$\alpha = 69.21°$

200.79°