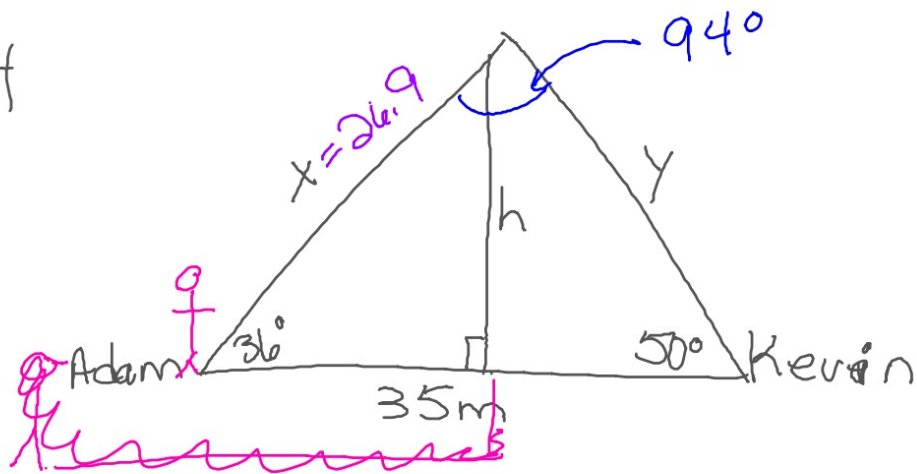


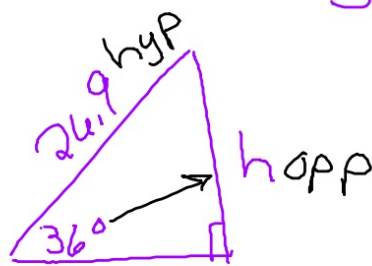
#4



$$\frac{\sin 94}{35} = \frac{\sin 50}{x}$$

$$x \sin 94 = 35 \sin 50$$

$$x = \frac{35 \sin 50}{\sin 94} \approx 26.9$$



$$\sin 36 = \frac{h}{26.9}$$

$$26.9 \sin 36 = h$$
$$h \approx 15.8 \text{ m}$$

Questions:

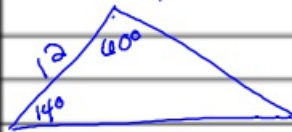
Notes:

When to use Law of Sines

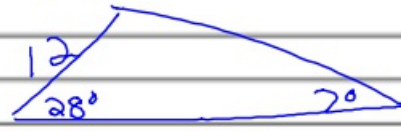
- information given is

ASA, AAS, or SSA

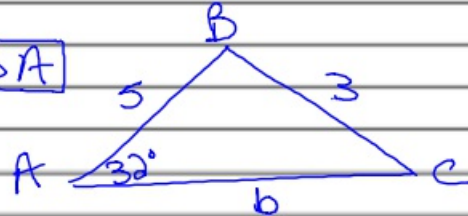
ASA



AAS



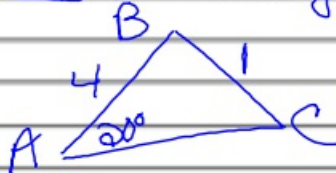
SSA



3 Things can happen:

- ① no triangle
- ② one triangle
- ③ two triangles

Ex | No Triangle



Find c 1st:

$$\frac{\sin 20^\circ}{1} = \frac{\sin C}{4}$$

$$\sin C = 4 \sin 20^\circ$$

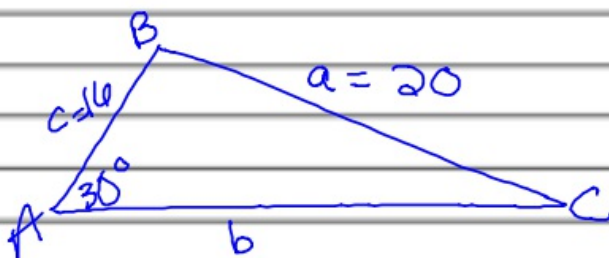
$$C = \sin^{-1}(4 \sin 20^\circ)$$

no triangle

~~C~~

Questions:

Notes: Ex 2) one (or two?) triangles



Solve the triangle (Find all missing)

$$\frac{\sin 30}{20} = \frac{\sin C}{16}$$

$$20 \sin C = 16 \sin 30$$

$$C = \sin^{-1}\left(\frac{16 \sin 30}{20}\right)$$

$$C \approx 23.6^\circ$$

$$B = 180 - A - C = 180 - 30 - 23.6 = 126.4^\circ$$

Check for another triangle

Angle C as $\sin C = .4$
in $\frac{2}{3}$ places. Once at C,

and again at $C' = 180 - C$
(complement of C)
Supplement

supp.

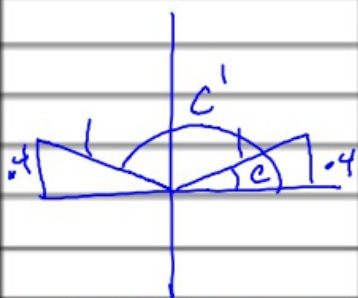
$$\text{1st: find } C' \quad 180 - 23.6 = 156.4^\circ$$

$$\text{2nd: find } B' \quad 180 - 30 - 156.4 = B'$$

$$B' = -6.4^\circ$$

angles in
a Δ

only 1 Δ



HW p. 385

1 beg
2