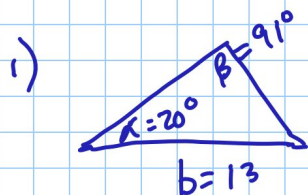
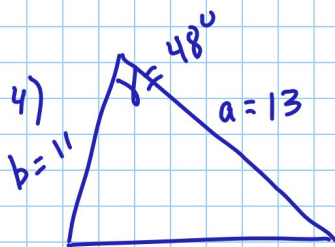


WARMUP

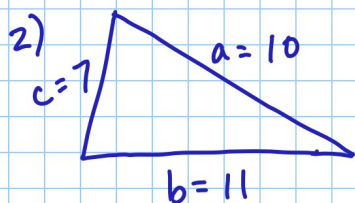
What info are you given



D



B



C

A) ASA

B) SAS

C) SSS

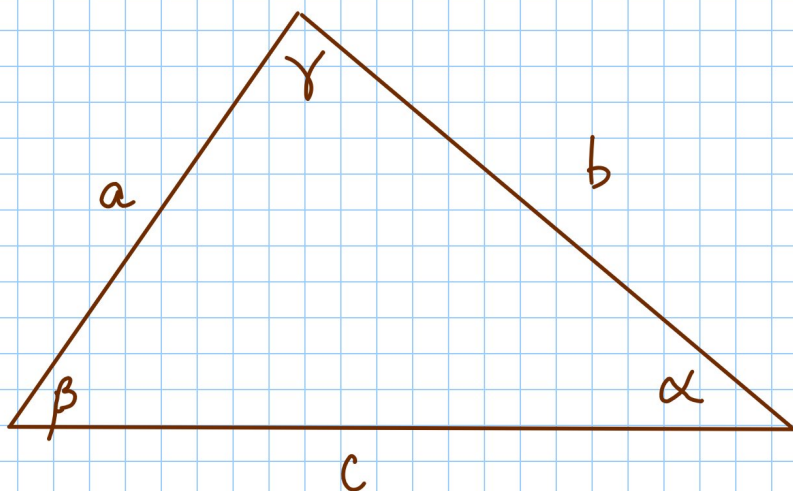
D) AAS

E) SSA



A

Section 7.2 The Law of Sines

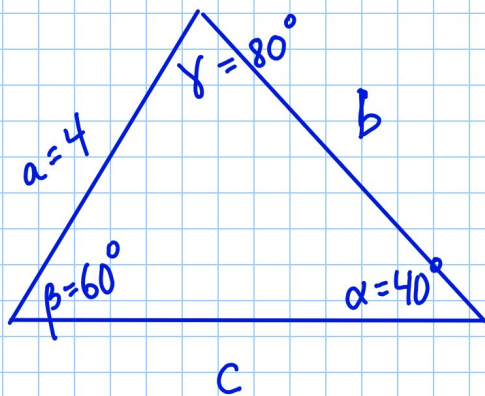


$$\frac{\sin \alpha}{a} = \frac{\sin \beta}{b} = \frac{\sin \gamma}{c}$$

Use Law of Sines for
AAS, ASA, and SSA

ex: Solve the triangle:

$$\alpha = 40^\circ, \beta = 60^\circ, a = 4$$



$$\gamma = \underline{80^\circ}$$

$$180 - 60 - 40$$

$$b = \underline{5.4}$$

$$\frac{\sin 60^\circ}{b} = \frac{\sin 40^\circ}{4}$$

$$c = \underline{6.1}$$

$$b \sin 40^\circ = 4 \sin 60^\circ$$

$$\frac{\sin 80^\circ}{c} = \frac{\sin 40^\circ}{4}$$

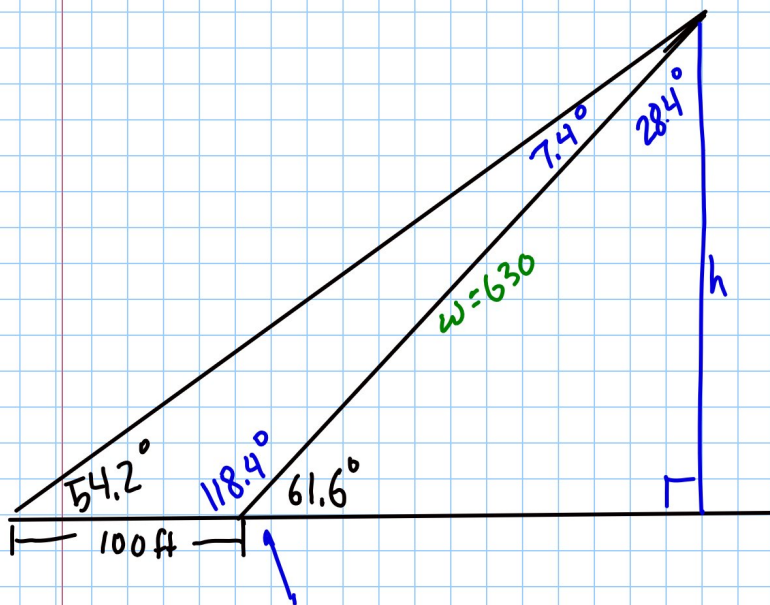
$$b = \frac{4 \sin 60^\circ}{\sin 40^\circ}$$

$$c = \frac{4 \sin 80^\circ}{\sin 40^\circ}$$

$$b = 5.4$$

$$c = 6.1$$

ex: While in D.C. you visit the Washington monument. From an unknown distance the angle of elevation is 61.6° . You then move 100ft further away. Now the angle is 54.2° . How tall (to the nearest foot) is the monument?



$$\frac{\sin 54.2^\circ}{w} = \frac{\sin 7.4^\circ}{100}$$

$$w = \frac{100 \sin 54.2^\circ}{\sin 7.4^\circ}$$

$$w = 630$$

$$180 - 61.6^\circ$$

p547-548

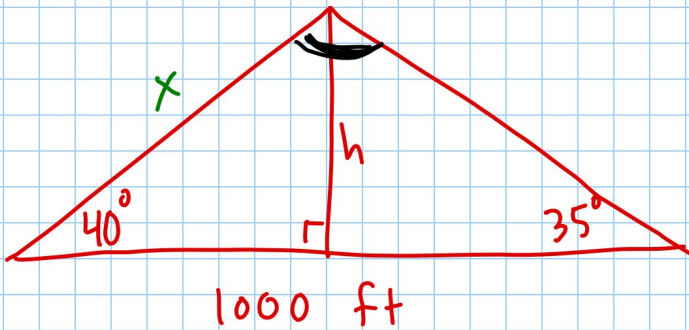
3, 11, 31, 33, 34

$$\frac{\sin 90^\circ}{630} = \frac{\sin 61.6^\circ}{h}$$

$$h = \frac{630 \sin 61.6^\circ}{\sin 90^\circ}$$

$$h = 554 \text{ ft}$$

33)



1) Find angle

2) Law of Sines, find x

3) Law of Sines or
SOHCAHTOA to find h