

VECTORS REVIEW

Law of Sines

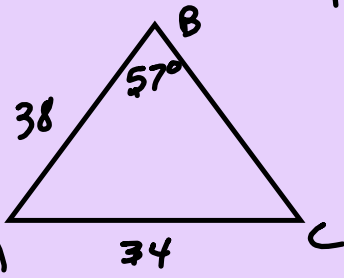
ASA

AAS

SSA

1
2

$$\sin B = 1.6$$

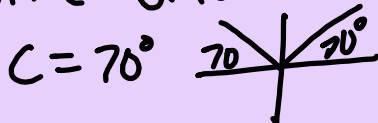


SSA - Law of Sines

Find A.

$$\frac{\sin C}{38} = \frac{\sin 57^\circ}{34}$$

$$\sin C = 0.937$$



$$C = 70^\circ$$

$$B = 57^\circ$$

$$A = 53^\circ$$

$$C' = 110^\circ$$

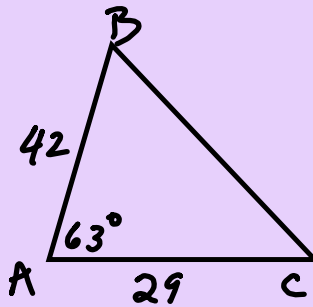
$$B = 57^\circ$$

$$A = 13^\circ$$

Law of Cosines

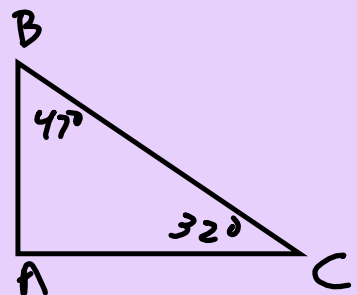
SAS, SSS

After Law of Cos.,
find smallest angle next



Law of Cosines
SAS

- List.
- Law of Sines $\frac{\sin A}{a} = \frac{\sin B}{b}$
 - Law of Cosines $a^2 =$
 - $x_t =$
 - $y_t =$
 - $a = \text{---} \quad a = \text{---}$



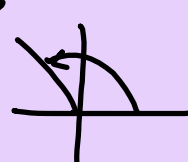
AAS - Law of Sines

7/ $|v| = 12$ $\theta = 120^\circ$

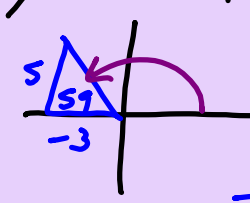
Find $\langle x, y \rangle$

$x = 12 \cos 120^\circ$

$y = 12 \sin 120^\circ$



8/ $\langle -3, 5 \rangle$



$(-3)^2 + (5)^2 = |v|^2$

$\sqrt{34} = |v|$

$\tan \theta = \frac{5}{-3}$

$\tan^{-1}(5/3) = 59^\circ$

$\theta = 121^\circ$

9) Dot Product

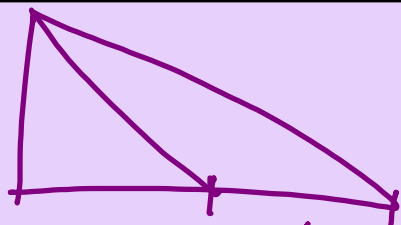
$\langle 2, -8 \rangle \cdot \langle 12, 3 \rangle$

$= 24 + -24$

$= 0$

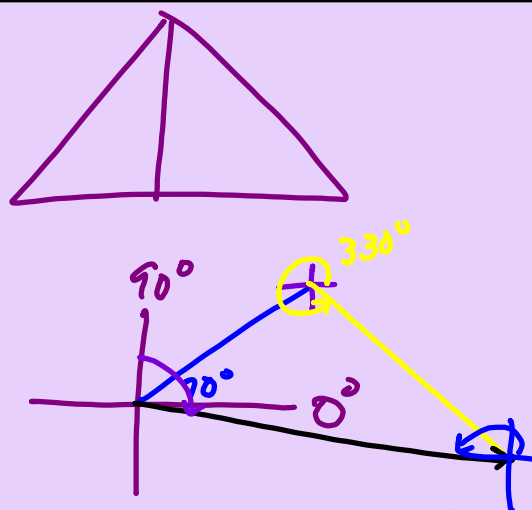
Orthogonal

11-12)



Law of Sines/Cosines

13-14) Vector - Forces



15) Incline

16-17) Navigation

18-19) Parametric

Resultant = start to end
Equilibrium = end to start