Law of Sines/Cosines

**CORE STANDARDS**

G.SRT.10

G.SRT.11

LESSON

**6-4**

 Secondary Math 3

OBJECTIVE **1. I can use the Law of Sines and Law of cosines to solve triangles.**

NOTES **Law of Sines**: For any triangle sine of each angle related to the length of the opposite side.

 $\frac{sinA}{a}=\frac{sinB}{b}=\frac{sinC}{c}$ or $\frac{a}{sinA}=\frac{b}{sinB}=\frac{c}{sinC}$



**Law of Cosines:** For any triangle, the Law of Cosines relates the length of a side to the other sides and the cosine of the included angle.

$$a^{2}=b^{2}+c^{2}-2bc\cos(A)$$

$$b^{2}=a^{2}+c^{2}-2ac\cos(B)$$

$$c^{2}=a^{2}+b^{2}-2ab\cos(C)$$

EXAMPLES



1. 4.





1. 5.
2. Triangle ABC with sides a = 6, b= 8, and m∠A = 35

PRACTICE **6-3** NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 [SHOW YOUR WORK]