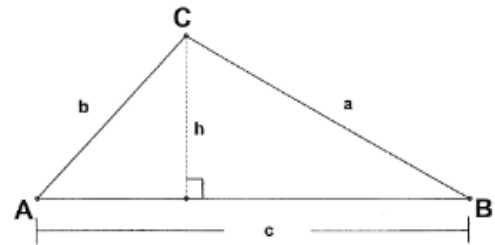# Acc: Law of Sines Notes

The Law of Sines In any triangle, there is a special relationship between the angles of the triangle and the lengths of the sides opposite the angles.

Law of Sines	$\dfrac{\sin A}{a} = \dfrac{\sin B}{b} = \dfrac{\sin C}{c}$

Prove the law of sines: $\dfrac{\sin A}{a} = \dfrac{\sin B}{b}$
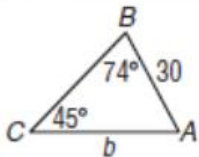
Step 1:

Sin A=   Sin B=

Step 2: get h alone

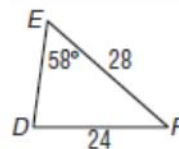Step 3: If two things are equal to the same thing, then they are....

Example 1 In $\triangle ABC$, find b.
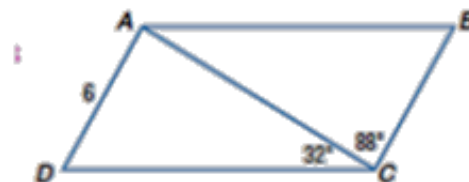
Example 2 In $\triangle DEF$, find $m\angle D$.

Find the missing variable and solve the triangle.

Ex 3.   If $a = 25$, $m\angle A = 72$, and $m\angle B = 17$, find b.

Ex 4. Find the perimeter of the parallelogram

Ex 5. **ENGINEERING** When the angle of elevation to the Sun is 62°, a telephone pole tilted at an angle of 7° from the vertical casts a shadow 30 feet long on the ground. Find the length of the telephone pole to the nearest tenth of a foot.