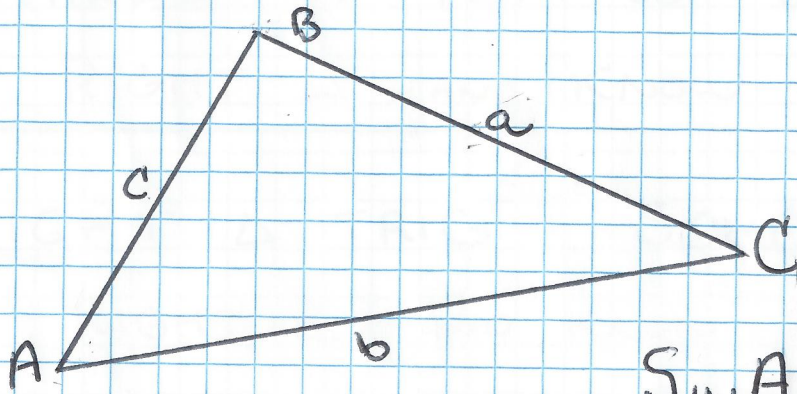
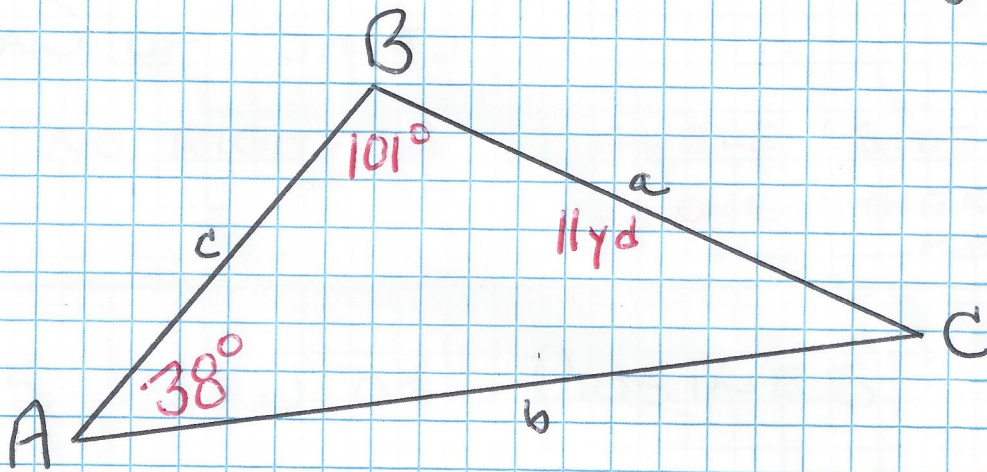


LAW of SINES



$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$



SOLVE THE TRIANGLE

USE LAW OF SINES TO FIND LENGTH OF SIDE b

$$\frac{\sin 38}{11} = \frac{\sin 101}{b} \quad b = \frac{(11)(\sin 101)}{(\sin 38)}$$

$$\text{Angle } C \quad 180 - 101 - 38 = 41^\circ$$

$$b = 17.5 \text{ yd}$$

$$\frac{\sin 38}{11} = \frac{\sin 41}{c}$$

$$c = 11.7 \text{ yd}$$

PYTHAGOREN THM $a^2 + b^2 = c^2$

RIGHT Δ AND KNOW 2 SIDES

RIGHT Δ TRIG SOHCAHTOA

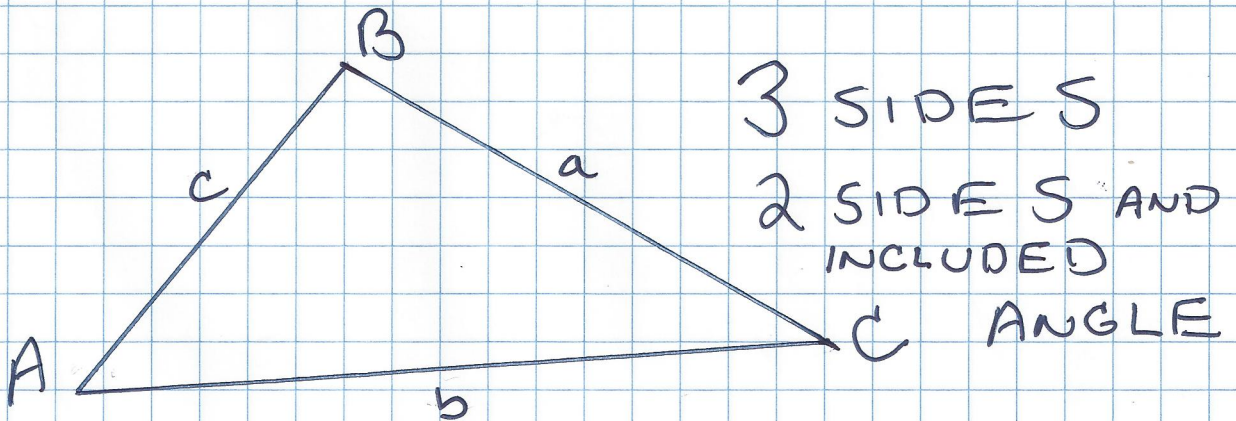
RIGHT Δ AND KNOW 2 SIDES
1 ANGLE / 1 SIDE

LAW OF SINES

NO RIGHT Δ ANGLE / SIDE PAIR
& ONE OTHER
MEASUREMENT

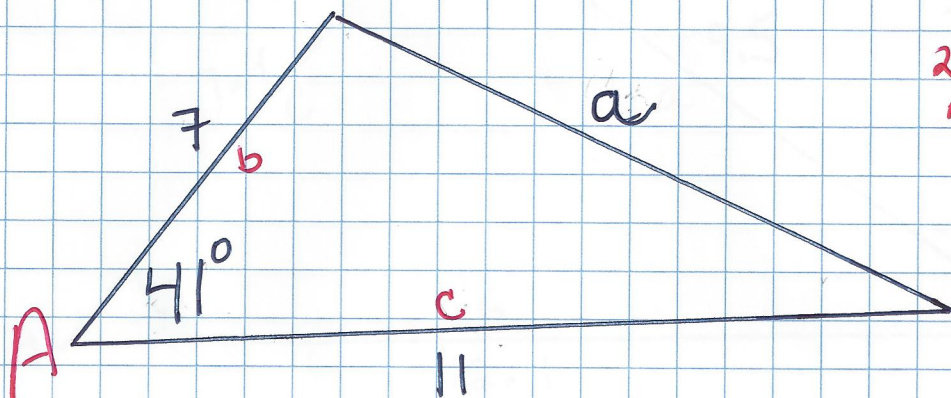
13-5 LAW OF COSINES

NO RIGHT Δ AND NO ANGLE / SIDE PAIR



$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$a^2 = b^2 + c^2 - 2bc \cos A$$



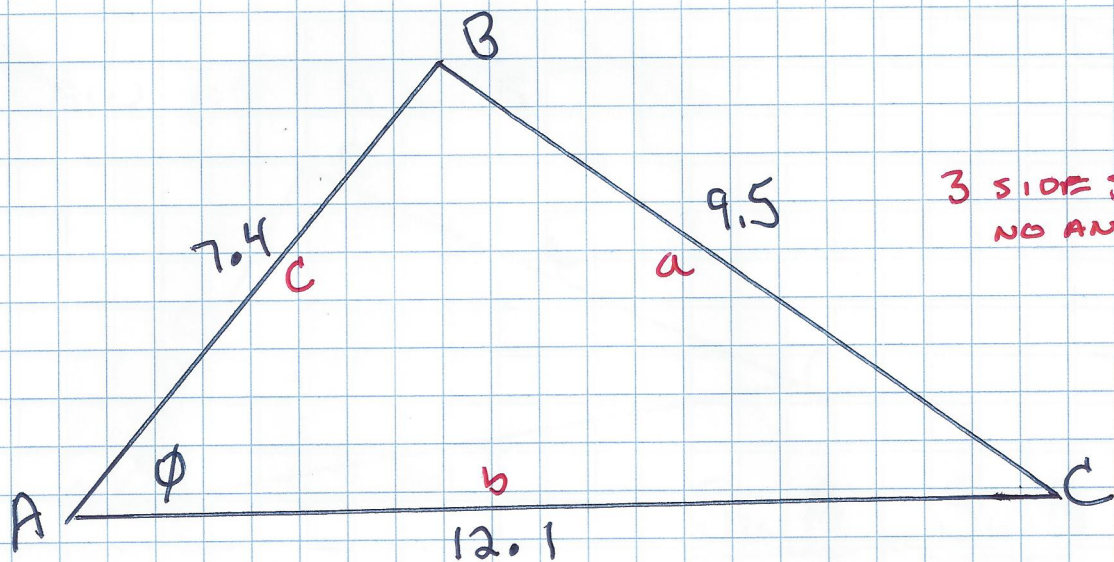
2 SIDES AND
INCLUDED ANGLE

Round to the hundredths

$$a^2 = 7^2 + 11^2 - 2(7)(11) \cos 41^\circ$$

$$a^2 = 53.77$$

$$a \approx 7.33$$



$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$9.5^2 = 12.1^2 + 7.4^2 - 2(12.1)(7.4) \cos A$$

$$9.5^2 - 12.1^2 - 7.4^2 = -2(12.1)(7.4) \cos A$$

$$-110.92 = -2(12.1)(7.4) \cos A$$

$$-110.92 = -179.08 \cos A$$

$$0.6194 = \cos A$$

$$51.73^\circ = m\angle A$$

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$b^2 = a^2 + c^2 - 2ac \cos B$$

$$c^2 = a^2 + b^2 - 2ab \cos C$$