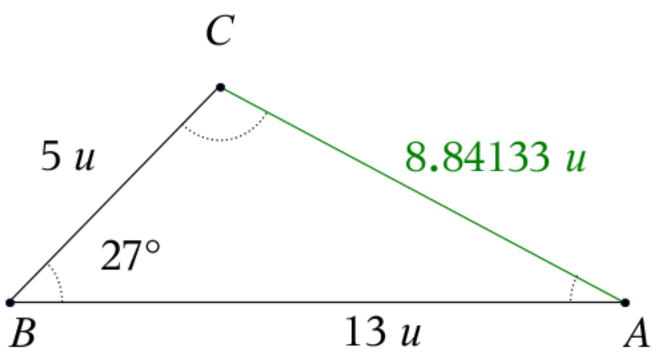


SAS tells us to use law of cosines

$b = \sqrt{5^2+13^2-2\cdot 5\cdot 13\cdot \cos(27.)}$ ▸ 8.84133

Now the method that you decide to use now is important!

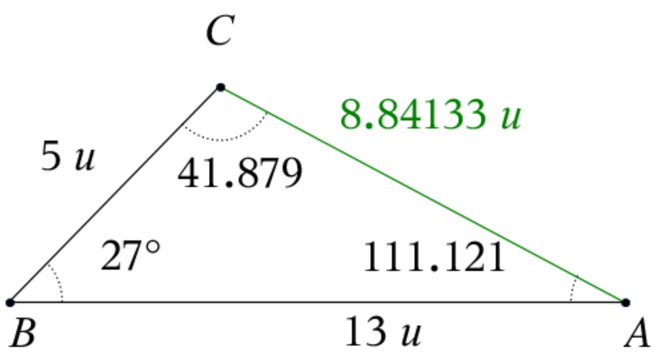
$\frac{\sin(27)}{8.841}=\frac{\sin C}{13}$ leads to $\sin C=\frac{13\cdot \sin(27)}{8.841}$

$\sin C=\frac{13\cdot \sin(27)}{8.841}$ leads to 41.8788

41.8788 leads most to

$m\angle A = 180-(27+41.879)$ ▸ 111.121

Do you see any problem with this process?



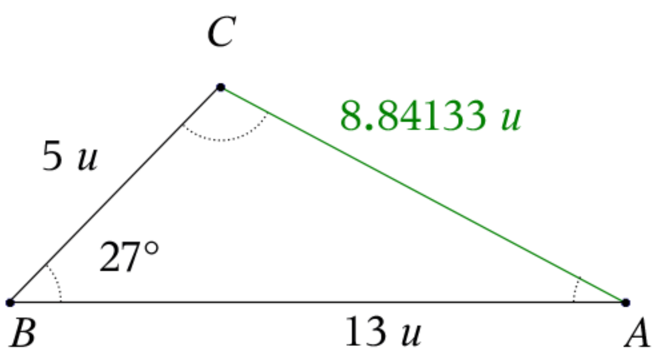
Now lets check using the law of sines

$$\frac{\sin(41.879)}{13} \approx 0.051351$$

$$\frac{\sin(27)}{8.841} \approx 0.051351$$

$$\frac{\sin(111.121)}{5} \approx 0.186564$$

See the multiple issues



Note: The supplement of angle C is

$$180-\arcsin\left(\frac{13\cdot\sin(27)}{8.841}\right)\approx 138.121$$

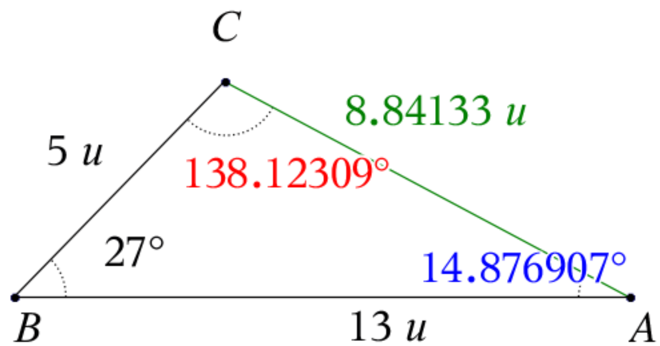
Now if we would have used the law of cosines, then

$$\cos C=\frac{5^2+(8.841)^2-13^2}{2\cdot 5\cdot 8.841}$$

$$m\angle C=\cos^{-1}\left(\frac{5^2+(8.841)^2-13^2}{2\cdot 5\cdot 8.841}\right) \blacktriangleright 138.131$$

This also leads us to

$$m\angle A=180-(27+138.131) \blacktriangleright 14.869$$



Now lets check using the law of sines

$$\frac{\sin(138.131)}{13} \approx 0.051341$$

$$\frac{\sin(27)}{8.841} \approx 0.051351$$

$$\frac{\sin(14.869)}{5} \approx 0.051322$$