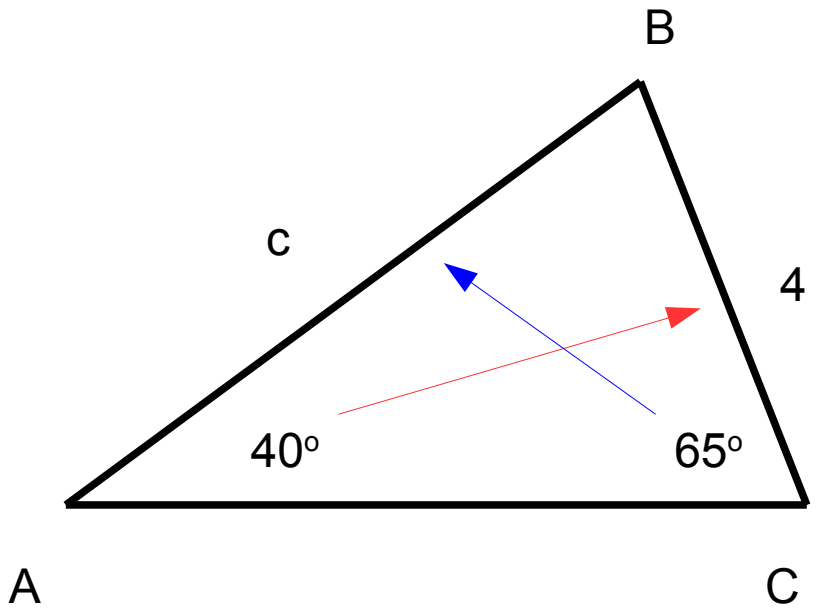


We know that the relationship Between:

Angle A with side a

Will be the same relationship as

Angle C with side c

The relationship is as follows:

a / Sine(A) = 4 / Sine(40) = **6.22**

c / Sine(C) = c / Sine(65) = **6.22** --> c = Sine(65) * 6.22

c = 5.63

Don't know what it is

Let's review... what is Sine again?

-- Think of it as a computer that takes in an ANGLE

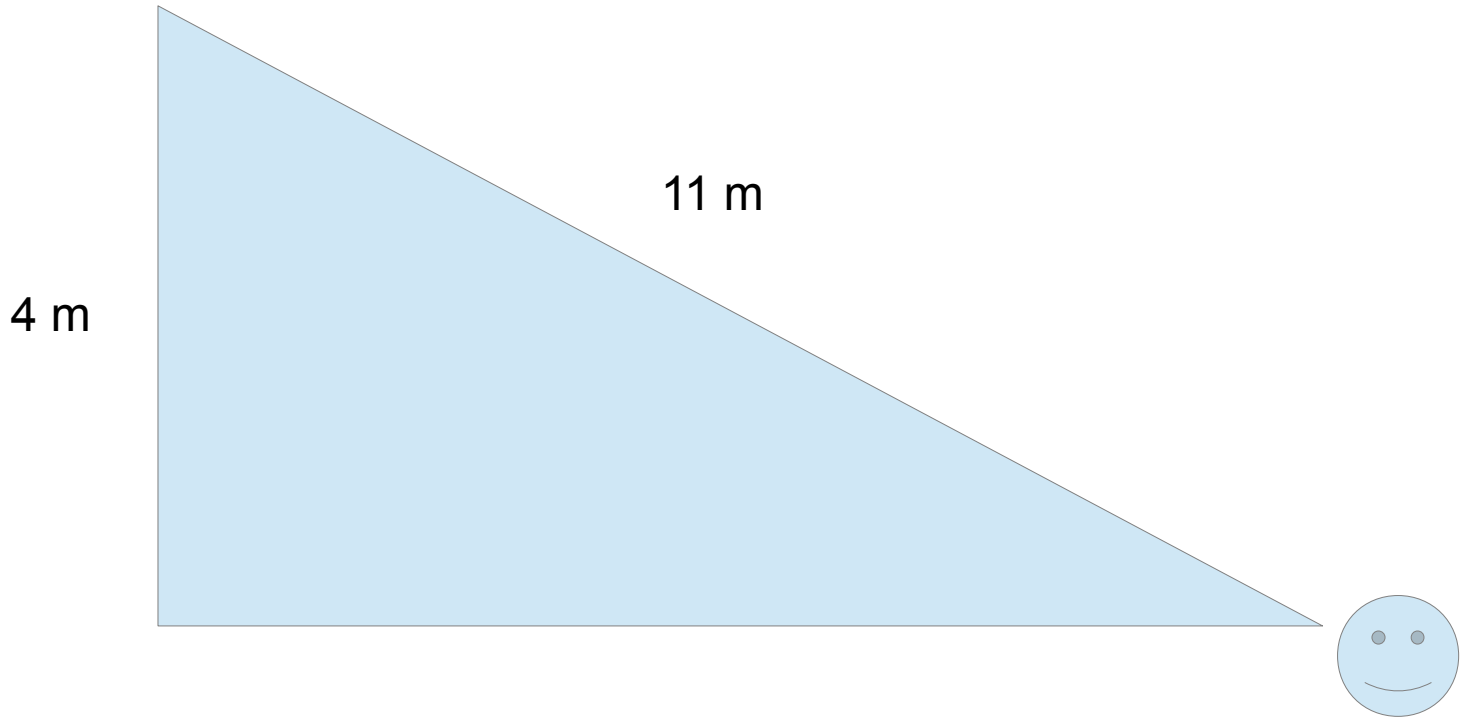
Ex. Sine(30), Sine(110), ...

-- What does it give back to you?

Gives us back the relationship between the OPPOSITE and HYPOTENUSE of a right triangle

Ex. Sine(30) = 0.5

What if we know the relationship but don't know the angle?

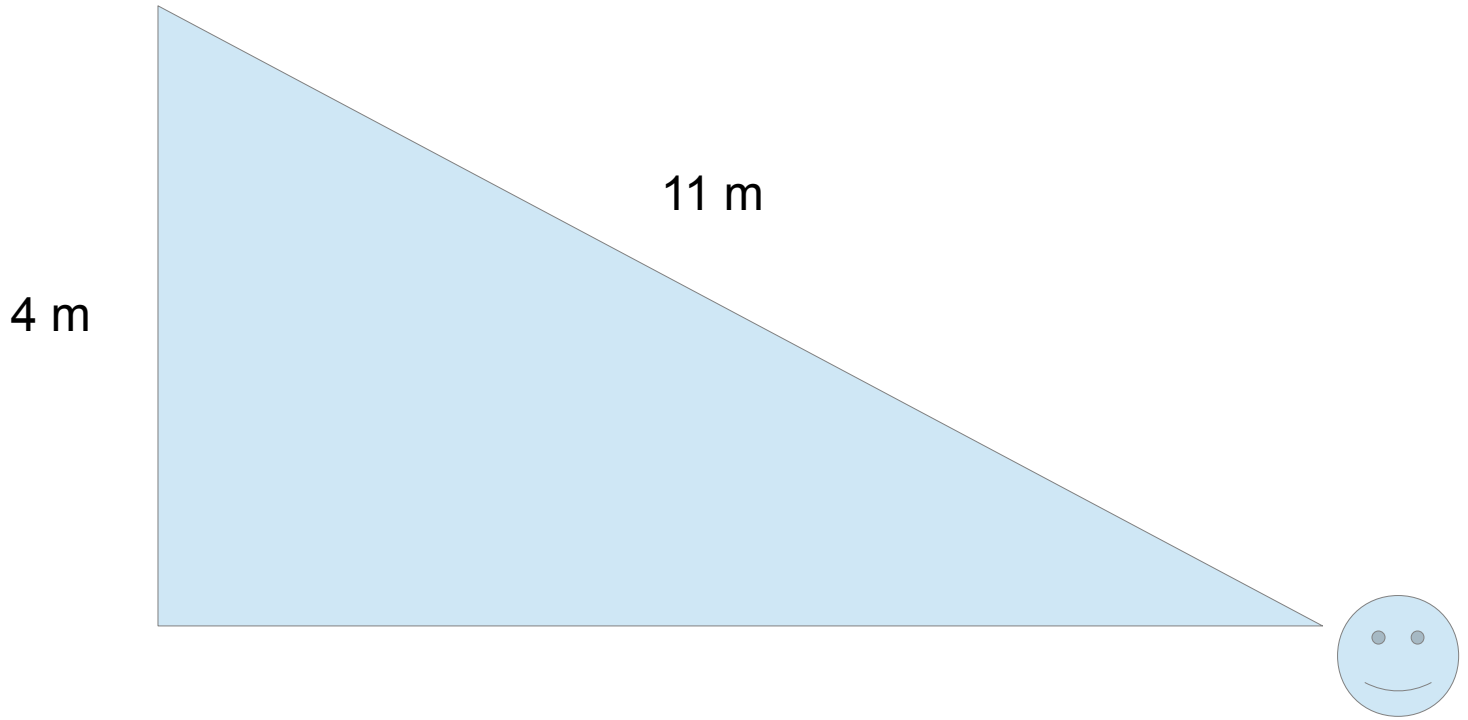


Sine(Some unknown angle) = 4/11

The relationship is less than 0.5 so we are looking lower than 30^{o}

What is the unknown angle?

When we know the relationship, we can Use the Inverse Sine (Sine^{-1}(relationship))



Sine(angle) = relationship

Sine^{-1}(relationship) = angle

Sine^{-1}(4/11) = **21°**