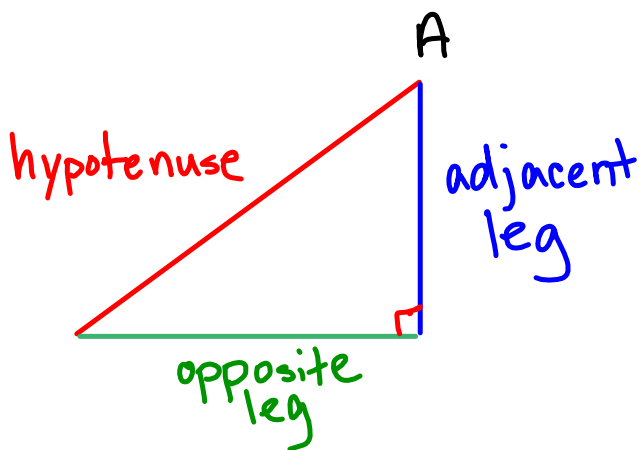
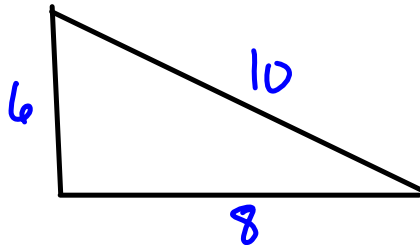
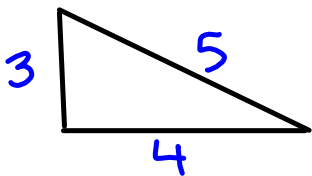


Sec. 10.6 Trigonometric Ratios

trigonometric ratios:
ratios of the side lengths of
right triangles.



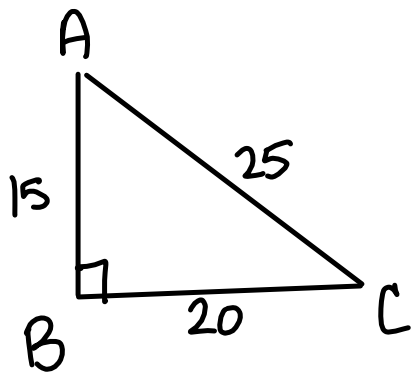
S
O
H } sin A =
sine

C
A
H } cos A =
cosine

T
O
A } tan A
tangent

Problem 1:

What are $\sin A$, $\cos A$, and $\tan A$ for the triangle below?



Problem 2:

What is the $\sin 29^\circ$ to the nearest ten-thousandth?

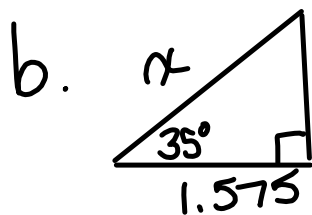
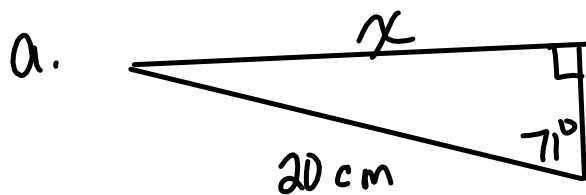
$$\sin 80^\circ ?$$

$$\tan 45^\circ ?$$

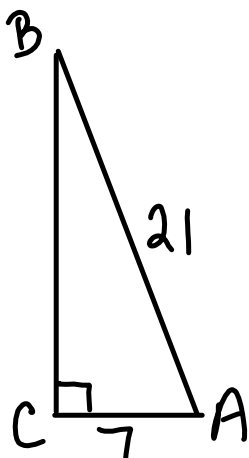
$$\cos 45^\circ ?$$

$$\sin 45^\circ ?$$

Problem 3: To the nearest tenth, how long is leg x in the triangle below?

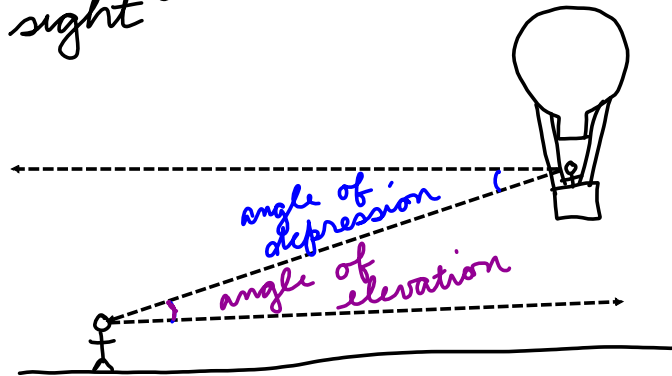


Problem 4: What is the measure of each angle in the triangle below?

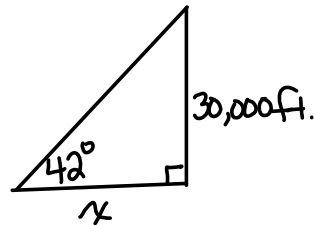


angle of elevation: an angle from the horizontal up to the line of sight

angle of depression: an angle from the horizontal down to the line of sight



Problem 5: Suppose a plane takes off at an angle of 42° with the ground. What horizontal distance has the plane traveled when it reaches an altitude of 30,000 ft? Round to the nearest foot.



Suppose you are waiting in line for a ride. You see your friends at the top of the ride. How far are you from the base of the ride?

