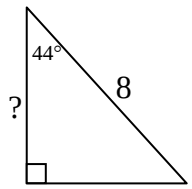
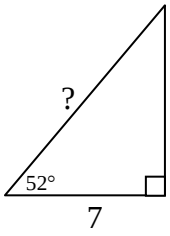
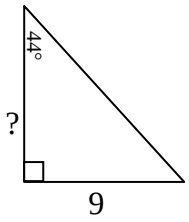
Sec 4.1 – Using Mathematical Models
Right Triangle Trigonometry

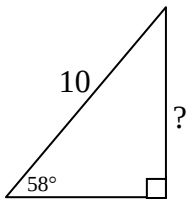
Name:

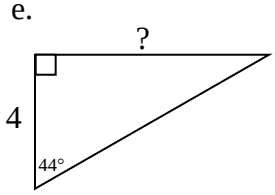
1. Find the requested unknown side of the following triangles.

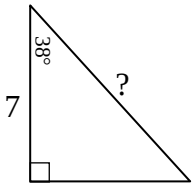
a. 

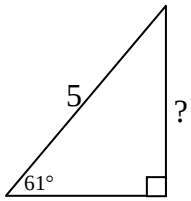
b. 

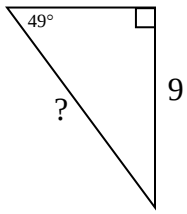
c. 

d. 

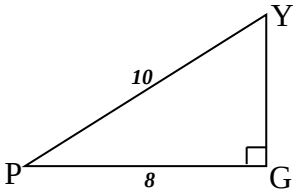
e. 

f. 

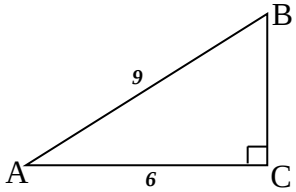
g. 

h. 

2. Find the value of sin P.



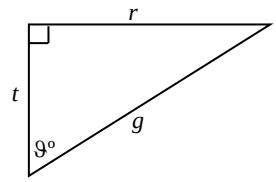
3. Find the EXACT value of tan B.



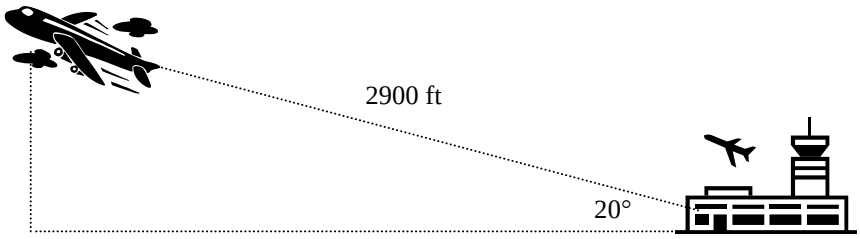
4. Which expression represents cos (ϑ) for the triangle shown?

A. $\frac{g}{r}$ **B.** $\frac{r}{g}$

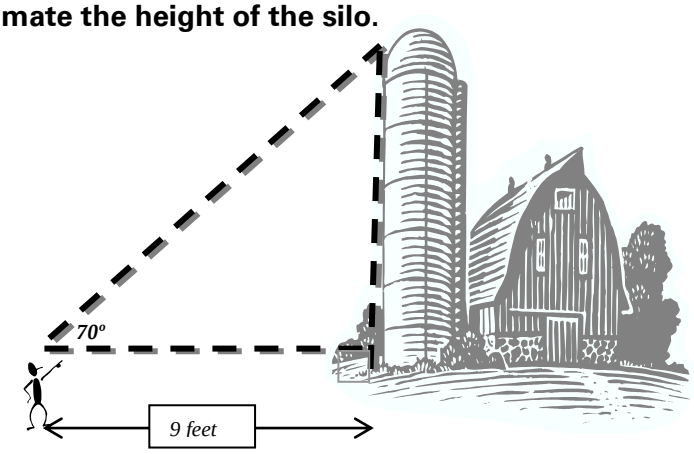
C. $\frac{g}{t}$ **D.** $\frac{t}{g}$



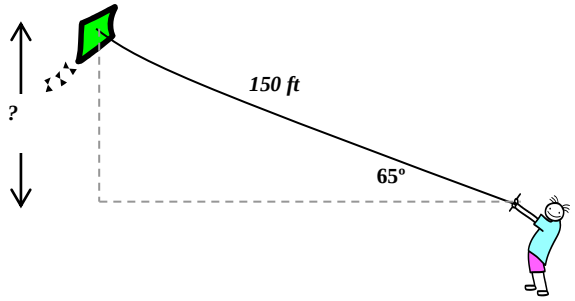
5. As a plane takes off it ascends at a 20° angle of elevation. If the plane has been traveling at an average rate of 290 ft/s and continues to ascend at the same angle, then how high is the plane after 10 seconds (the plane has traveled 2900 ft).



6. A person noted that the angle of elevation to the top of a silo was 65º at a distance of 9 feet from the silo. Using the diagram approximate the height of the silo.

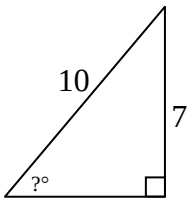


7. A kid is flying a kite and has reeled out his entire line of 150 ft of string. If the angle of elevation of the string is 65º then which expression gives the vertical height of the kite?

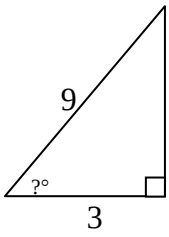


2. Find the requested unknown angles of the following triangles using a calculator.

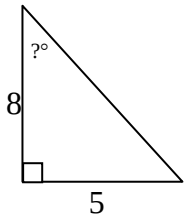
a.



b.



c.

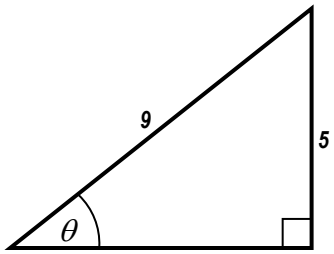


2. Find the approximate unknown angle, θ, using <u>INVERSE trigonometric ratios</u> ($\sin^{-1}$, $\cos^{-1}$, or $\tan^{-1}$).

a. $\cos\theta = 0.823$

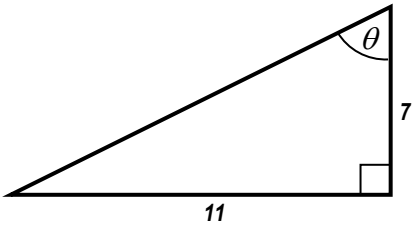
θ =

b.



θ =

c.



θ =

3. Indentify each of the following requested Trig Ratios.

A. sin A =

B. cos B =

C. Measure of angle B =