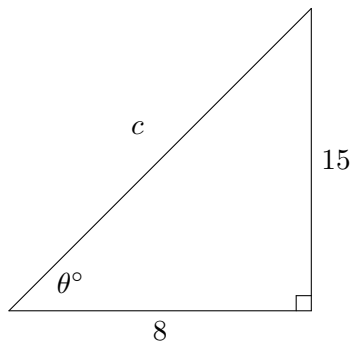


Instructions: Answer the questions below as completely as you can. Show all of your work and use complete sentences where appropriate. Graphing calculators are not allowed.

1. Given the right triangle below, using the right triangle definitions of the trigonometric functions find the following values:



(a) $\sin \theta$

(e) $\sec \theta$

(b) $\cos \theta$

(f) $\cot \theta$

(c) $\tan \theta$

(g) $\csc(90^\circ - \theta)$

(d) $\cos(90^\circ - \theta)$

(h) $\sin(\theta - 360^\circ)$

2. A shopping mall has a ramp that goes from the ground floor to a second floor 28 feet above the ground floor. Suppose the ramp makes an angle of 22° with the ground floor. How long is the ramp?

Write your answer in a complete sentence including units.