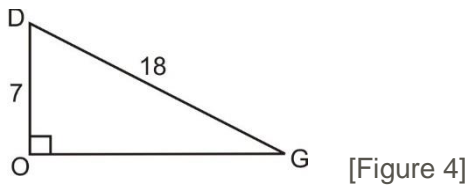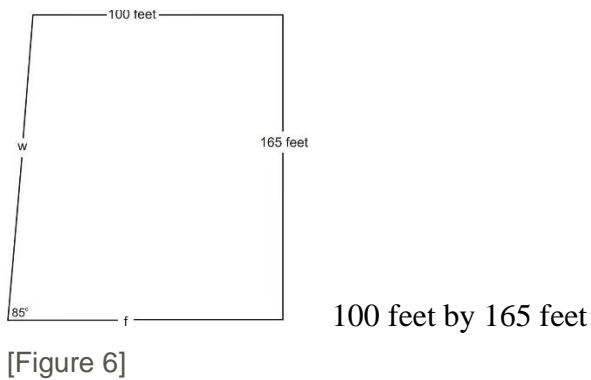***Unit 1***

4. Solve the right triangle.

[Figure 4]

6. The modern building shown below is built with an outer wall (shown on the left) that is not at a 90-degree angle with the floor. The wall on the right is perpendicular to both the floor and ceiling. Find the length of w.

[Figure 6]

100 feet by 165 feet

8. If $\cos(-x)=34$ and $\tan x=7-\sqrt{3}$, find $\sin(-x)$.

10. $\sin \theta=13$ find the value(s) of $\cos \theta$.

12. (3, -4) is a point on the terminal side of θ. Find the exact values of the six trigonometric functions.

Unit 2

8. Graph $y = \sin x$ and $y = \cos x$ on the same set of axes over the interval $[0,2\pi]$. Where do they intersect?

For the following two questions, determine the amplitude, period, frequency, vertical shift, and phase shift. Then, graph each function over the interval $[0,2\pi]$.

9. $Y = -2 + 4 \sin 5x$

10. $f(x) = 14 \cos (12 (x - \pi3))$