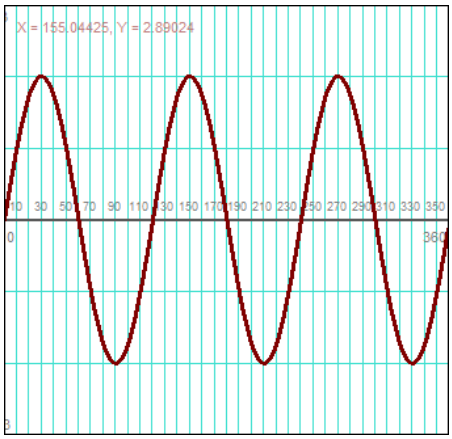
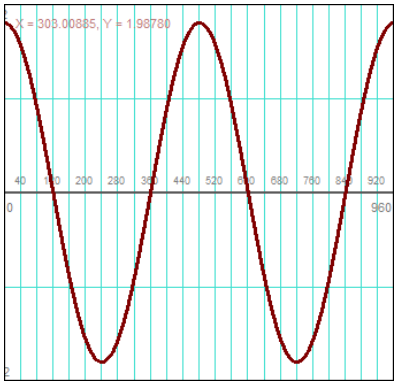
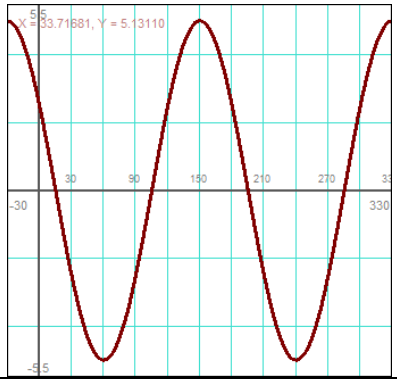
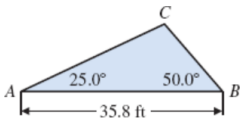
MTH 111 Chapter 14 Graded Homework
AnswerKey

14.1 #8 8. $\cos 348.2°$ 0.9789	14.1 #10 10. $\tan 125.5°$ -1.402	14.1 #20 20. $y = 2\sin 3x$ 
14.2 #10 10. $y = 1.8\cos\frac{3}{4}x$ Amplitude = 1.8 Period = 480° 	14.2 #18 18. $y = 5\cos(2x + 60°)$ Amplitude = 5 Period = 180° Phase shift = $-30°$ 	14.3 #6 6. $B = 24.7°, C = 136.1°, a = 342$ m $A = 19.2°, b = 435\ m, c = 721\ m$
14.3 #14 14. $A = 58.2°, a = 39.7$ mi, $c = 27.5$ mi $C = 36.1°, B = 85.7°, b = 46.6\ mi$	14.3 #18  $AC = 28.4\ ft, BC = 15.7\ ft, total = 44.1\ ft$	14.4 #8 8. $A = 36.1°, b = 14.5$ m, $a = 12.5$ m 2 triangles $B = 43.1°, C = 100.8°, c = 20.8\ m$ or $B = 136.9°, C = 7°, c = 2.6\ m$
14.4 #16	14.5 #8	14.5 #10

16. $C = 8.7°, c = 89.3\text{ mi}, b = 61.9\text{ mi}$

One triangle

$B = 6°, A = 165.3°, a = 61.7\ mi$

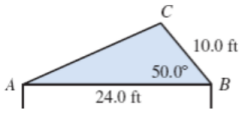
8. $C = 108.5°, a = 415\text{ m}, b = 325\text{ m}$

$c = 602.9\ m, A = 40.8°, B = 30.7°$

10. $a = 207\text{ mi}, b = 106\text{ mi}, c = 142\text{ mi}$

$C = 39.4°, A = 67.7°, B = 72.9°$

14.5 #12



19.2 ft

14.5 #22

24. In the framework shown in Illustration 8, we know that $AB = DE$, $BC = CD$, $AH = FE$, $HG = GF$. Find

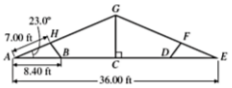
a. length HB,

b. $\angle AHB$,

c. length GC, and

d. length AG.

Illustration 8



a. 3.4 ft
b. 58.3°
c. 7.6 ft
d. 19.6 ft

14.5 #26

26. A ship starts at point A and travels 125 mi northeast. It then travels 150 mi due east and arrives at point B. If the ship had sailed directly from A to B, what distance would it have traveled?

254 mi