Math 1330
Homework 26 (7.1)

The homework problems come from the exercises in Chapter 7 of the online text. Problem 7.1.4 refers to problem 4 in Chapter 7, Section 1. Record your answers to these problems in the EMCF titled "**Homework 26**."

Note: Many of the homework problems in this assignment require the use of a calculator. You are expected to give answers rounded to the nearest hundredth or tenth as indicated in the problem. However, any test problems involving these concepts will involve angles whose sine, cosine and tangent you can compute without a calculator. You **WILL NOT** be allowed to use a calculator on the test OR final. The problems on the test and final will not require a calculator.

1.   Problem 7.1.4 a

   A. $sin\,60° = \dfrac{9}{x}$ $tan\,60° = \dfrac{y}{9}$

   B. $cos\,60° = \dfrac{9}{x}$ $tan\,60° = \dfrac{9}{y}$

   C. $tan\,60° = \dfrac{x}{9}$ $cos\,60° = \dfrac{y}{9}$

   D. $cos\,30° = \dfrac{9}{x}$ $tan\,60° = \dfrac{y}{9}$

   E. $cos\,60° = \dfrac{9}{x}$ $tan\,60° = \dfrac{y}{9}$

2.   Problem 7.1.4 b

   A. $x = 18$ $y = 3\sqrt{3}$

   B. $x = 18$ $y = 9\sqrt{3}$

   C. $x = 6\sqrt{3}$ $y = 9\sqrt{3}$

   D. $x = 9\sqrt{3}$ $y = 18$

   E. $x = \dfrac{9\sqrt{3}}{2}$ $y = 9\sqrt{3}$

3.   Problem 7.1.6 a

   A. $\tan 30° = \dfrac{x}{15}$ $\cos 30° = \dfrac{y}{15}$

   B. $\tan 30° = \dfrac{x}{15}$ $\sin 30° = \dfrac{y}{15}$

   C. $\tan 30° = \dfrac{x}{15}$ $\cos 30° = \dfrac{15}{y}$

   D. $\cos 30° = \dfrac{15}{x}$ $\tan 30° = \dfrac{y}{15}$

   E. $\tan 30° = \dfrac{15}{x}$ $\sin 30° = \dfrac{15}{y}$

4.   Problem 7.1.6 b

   A. $x = 5\sqrt{3}$ $y = \dfrac{15\sqrt{3}}{2}$

   B. $x = 30$ $y = 7.5$

   C. $x = 5\sqrt{3}$ $y = 10\sqrt{3}$

   D. $x = 15\sqrt{3}$ $y = 10\sqrt{3}$

   E. $x = 15\sqrt{3}$ $y = 30$

5.   Problem 7.1.8 a

   A. $\sin 45° = \dfrac{x}{11}$ $\cos 45° = \dfrac{y}{11}$

   B. $\cos 45° = \dfrac{11}{x}$ $\sin 45° = \dfrac{11}{y}$

   C. $\sin 45° = \dfrac{11}{x}$ $\cos 45° = \dfrac{11}{y}$

   D. $\cos 45° = \dfrac{x}{11}$ $\sin 45° = \dfrac{11}{y}$

   E. $\cos 45° = \dfrac{x}{11}$ $\sin 45° = \dfrac{y}{11}$

6.   Problem 7.1.8 b

   A. $x = 11\sqrt{2}$ $y = 11\sqrt{2}$

   B. $x = \dfrac{\sqrt{2}}{11}$ $y = \dfrac{\sqrt{2}}{11}$

   C. $x = 22$ $y = 22$

   D. $x = \dfrac{11\sqrt{2}}{2}$ $y = \dfrac{11\sqrt{2}}{2}$

   E. $x = 5.5$ $y = 5.5$

7.   Problem 7.1.20

   A.   17.30
   B.   19.28
   C.   19.80
   D.   23.82
   E.   25.05

8.   Problem 7.1.22

   A.   8.60
   B.   14.00
   C.   7.16
   D.   8.01
   E.   8.30

9.   Problem 7.1.24 (round to the nearest tenth of a degree)

   A.   56.4°
   B.   41.4°
   C.   48.6°
   D.   53.1°
   E.   36.9°

10.   Problem 7.1.26 (round to the nearest tenth of a degree)

    A.   36.0°

    B.   43.3°

    C.   46.7°

    D.   48.6°

    E.   54.0°

11.   Problem 7.1.28

    A. $CB = 13.89$ $m\angle C = 59.74°$ $m\angle B = 30.26°$

    B. $CB = 13.89$ $m\angle C = 30.26°$ $m\angle B = 59.74°$

    C. $CB = 193$ $m\angle C = 59.74°$ $m\angle B = 30.26°$

    D. $CB = 193$ $m\angle C = 30.26°$ $m\angle B = 59.74°$

12.   Problem 7.1.30

    A.   TR = 5.46   IR = 5.85

    B.   TR = 6.39   IR = 5.46

    C.   TR = 7.52   IR = 5.85

    D.   TR = 5.46   IR = 8.52

    E.   TR = 5.85   IR = 5.46

13.   Problem 7.1.32 b

    A.   45°, 45°, 90°

    B.   45.6°, 45.6°, 88.8°

    C.   69.5°, 69.5°, 41.0°

    D.   44.4°, 44.4°, 91.2°

    E.   20.5°, 20.5°, 139.0°

14.   Problem 7.1.34 b

    A.   11 feet

    B.   9.1 feet

    C.   6.4 feet

    D.   8.3 feet

    E.   12.5 feet

15. Problem 7.1.36 b

      A.   12.3 meters

      B.   13.2 meters

      C.   16.8 meters

      D.   19.3 meters

      E.   15.2 meters