

Homework 12 (4.1)

Problem 4.1.12 refers to problem 12 in Chapter 4, Section 1 from the online text. Record your answers to all the problems in the EMCF titled “**Homework 12.**”

1. Problem 4.1.12

A. $7\sqrt{2}$

B. 7

C. $\frac{7\sqrt{2}}{2}$

D. $\frac{7}{2}$

E. None of these

2. Problem 4.1.16

A. $\sqrt{6}$

B. $4\sqrt{3}$

C. 6

D. $2\sqrt{6}$

E. None of the above

3. Problem 4.1.24

A. $x = \frac{22\sqrt{3}}{3}, y = \frac{44\sqrt{3}}{3}$

B. $x = 11, y = 11\sqrt{3}$

C. $x = 11\sqrt{2}, y = 11\sqrt{2}$

D. $x = 11\sqrt{2}, y = 11\sqrt{6}$

E. None of the above

4. Problem 4.1.28

A. $x = \frac{15\sqrt{3}}{2}, y = \frac{45}{2}$

B. $x = \frac{15\sqrt{6}}{2}, y = 15\sqrt{6}$

C. $x = 15, y = 30$

D. $x = \frac{15\sqrt{3}}{2}, y = 15\sqrt{3}$

5. Problem 4.1.34: Use the information given in the problem and find DE , $\sin F$ and $\cos F$.

A. $DE = 24$; $\sin F = \frac{24}{25}$; $\cos F = \frac{7}{25}$

B. $DE = 7$; $\sin F = \frac{7}{25}$; $\cos F = \frac{24}{25}$

C. $DE = 7$; $\sin F = \frac{7}{25}$; $\cos F = \frac{25}{24}$

D. $DE = 7$; $\sin F = \frac{7}{24}$; $\cos F = \frac{24}{25}$

E. $DE = 24$; $\sin F = \frac{24}{25}$; $\cos F = \frac{7}{24}$

6. Problem 4.1.34: Use the information given in the problem and find $\tan D$ and $\sec D$.

A. $\tan D = \frac{7}{24}$; $\sec D = \frac{25}{7}$

B. $\tan D = \frac{7}{24}$; $\sec D = \frac{7}{25}$

C. $\tan D = \frac{24}{7}$; $\sec D = \frac{25}{7}$

D. $\tan D = \frac{7}{25}$; $\sec D = \frac{25}{7}$

E. $\tan D = \frac{24}{7}$; $\sec D = \frac{25}{24}$

7. Problem 4.1.36

A. $\sin \theta = \frac{7}{9}$; $\cos \theta = \frac{7\sqrt{2}}{8}$

B. $\sin \theta = \frac{9}{7}$; $\cos \theta = \frac{9\sqrt{2}}{8}$

C. $\sin \theta = \frac{7}{9}$; $\cos \theta = \frac{4\sqrt{2}}{9}$

D. $\sin \theta = \frac{9\sqrt{2}}{8}$; $\cos \theta = \frac{9}{7}$

E. $\sin \theta = \frac{4\sqrt{2}}{9}$; $\cos \theta = \frac{7}{9}$

8. Problem 4.1.44: Find x and $\csc \beta$.

A. $x = 44$; $\csc \beta = \frac{44}{7}$

B. $x = 65$; $\csc \beta = \frac{65}{7}$

C. $x = \sqrt{65}$; $\csc \beta = \frac{\sqrt{65}}{7}$

D. $x = \sqrt{11}$; $\csc \beta = \frac{\sqrt{11}}{7}$

E. None of the above

9. Problem 4.1.48: Find $\sin \theta$ and $\tan \theta$.

A. $\sin \theta = \frac{\sqrt{21}}{2}$; $\tan \theta = \frac{\sqrt{21}}{5}$

B. $\sin \theta = \frac{\sqrt{21}}{5}$; $\tan \theta = \frac{\sqrt{21}}{2}$

C. $\sin \theta = \frac{2}{5}$; $\tan \theta = \frac{5\sqrt{21}}{21}$

D. $\sin \theta = \frac{\sqrt{29}}{5}$; $\tan \theta = \frac{2\sqrt{29}}{29}$

E. None of the above

10. In right triangle ABC with right angle C, $AC = 9$ and the measure of angle B = 30° . Find the length of AB.

A. $9\sqrt{3}$

B. $9\sqrt{2}$

C. $3\sqrt{3}$

D. $6\sqrt{3}$

E. 18

11. The angles 46° and 44° are complementary.
A. True B. False
12. $\sin 60^\circ = \cos 30^\circ$.
A. True B. False
13. In a right triangle, one of the angles is 90° and the sum of the other two angles is 90° .
A. True B. False
14. In a right triangle, if two sides are known, we can solve the triangle.
A. True B. False
15. In a right triangle, if the two acute angles are known, we can solve the triangle.
A. True B. False