

Homework 27 (7.2)

The homework problems come from the exercises in Chapter 7 of the online text. Problem 7.2.2 refers to problem 2 in Chapter 7, Section 2. Record your answers to these problems in the EMCF titled “**Homework 27.**”

Note: Some of the homework problems in this assignment require the use of a calculator. Give exact answers whenever possible. 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 7.2.2

A. $\sqrt{58} \text{ in}^2$

B. $\frac{21}{2} \text{ in}^2$

C. 21 in^2

D. $\frac{\sqrt{58}}{2} \text{ in}^2$

E. None of the above.

2. Problem 7.2.4

A. $\frac{\sqrt{61}}{2} \text{ cm}^2$

B. 30 cm^2

C. 15 cm^2

D. $\frac{61}{2} \text{ cm}^2$

E. None of the above.

3. Problem 7.2.6

A. 8 m^2

B. 16 m^2

C. 32 m^2

D. 64 m^2

E. None of the above.

4. Problem 7.2.8

- A. 19.14 m²
- B. 31.36 m²
- C. 38.28 m²
- D. 62.72 m²

5. Problem 7.2.10 a

- A. $\sin A = \frac{c}{h}$
- B. $\sin B = \frac{h}{c}$
- C. $\sin B = \frac{c}{h}$
- D. $\sin C = \frac{b}{h}$

6. Problem 7.2.12

- A. $\frac{55\sqrt{3}}{2} \text{ cm}^2$
- B. 55 cm²
- C. $\frac{55}{2} \text{ cm}^2$
- D. $5\sqrt{21} \text{ cm}^2$

7. Problem 7.2.14

- A. $\frac{35\sqrt{3}}{4} \text{ ft}^2$
- B. $\frac{35\sqrt{3}}{2} \text{ ft}^2$
- C. $\frac{35}{4} \text{ ft}^2$
- D. $\frac{35\sqrt{2}}{2} \text{ ft}^2$
- E. $\frac{35\sqrt{2}}{4} \text{ ft}^2$

8. Problem 7.2.16
- A. 10.28 cm^2
 - B. 12.26 cm^2
 - C. 24.51 cm^2
 - D. 20.57 m^2
 - E. None of the above.

9. Problem 7.2.18

- A. 4.95 m^2
- B. 7.73 m^2
- C. 11.32 m^2
- D. 11.46 m^2
- E. 15.46 m^2

10. Problem 7.2.20

- A. 12.94 cm^2
- B. 25.00 cm^2
- C. 43.30 cm^2
- D. 48.30 cm^2
- E. 28.87 cm^2

11. Problem 7.2.22

- A. 23.87 in^2
- B. 25.60 in^2
- C. 51.19 in^2
- D. 51.31 in^2
- E. None of the above

12. Problem 7.2.24

- A. $18\sqrt{2} \text{ cm}^2$
- B. $18\sqrt{3} \text{ cm}^2$
- C. $36\sqrt{3} \text{ cm}^2$
- D. 18 cm^2
- E. None of the above

13. Problem 7.2.26 b

- A. 66.42° and 113.58°
- B. 23.58°
- C. 23.58° and 156.42°
- D. This triangle does not exist.
- E. None of the above

14. Problem 7.2.28

- A. There is no such triangle.
- B. 45°
- C. $45^\circ, 135^\circ$
- D. $30^\circ, 150^\circ$
- E. $60^\circ, 120^\circ$

15. Problem 7.2.30

- A. $\frac{363\sqrt{3}}{2} \text{ cm}^2$
- B. $\frac{363}{2} \text{ cm}^2$
- C. $\frac{121\sqrt{3}}{4} \text{ cm}^2$
- D. $242\sqrt{3} \text{ cm}^2$
- E. $\frac{121\sqrt{2}}{2} \text{ cm}^2$