

Chapter 5 Mid-Chapter Review Extra Practice Answers

1. a) $\cot \theta = \frac{9}{14}$

b) $\csc \theta = \frac{12}{5}$

c) $\sec \theta = 2$

d) $\csc \theta = \frac{7}{4}$

2. a) $\theta = 16^\circ$

b) $\theta = 56^\circ$

c) $\theta = 62^\circ$

d) $\theta = 82^\circ$

3. a) $\frac{1}{2}$

b) $\frac{1}{2}$

c) $\frac{1}{3}$

d) 1

4. a) i) $a = 6\sqrt{2}$, $b = 6\sqrt{2}$

ii) 36 sq. units

b) i) $s = 7\frac{\sqrt{3}}{3}$, $r = 14\frac{\sqrt{3}}{3}$

ii) $49\frac{\sqrt{3}}{6}$ sq. units

5. a) $\theta = 0^\circ, 360^\circ$

b) $\theta = 315^\circ$

c) $\theta = 60^\circ$

d) $\theta = 30^\circ$

6. a) $\frac{\sqrt{2}}{2}$

b) -1

c) $-\frac{1}{2}$

d) $-\frac{1}{2}$

7. Given a trigonometric ratio in quadrant 3, determine:

i) The exact values of x , y , and r .

ii) The value of the θ to the nearest degree if $0^\circ \leq \theta \leq 360^\circ$.

a) i) $x = -4$, $y = -8$, $r = 4\sqrt{5}$

ii) $\theta = 243^\circ$

b) i) $x = -2\sqrt{30}$, $y = -13$, $r = 17$

ii) $\theta = 230^\circ$

c) i) $x = -8$, $y = -\sqrt{57}$, $r = 11$

ii) $\theta = 223^\circ$

d) i) $x = -5$, $y = -\sqrt{119}$, $r = 12$

ii) $\theta = 245^\circ$

e) i) $x = -2\sqrt{5}$, $y = -4$, $r = 6$

ii) $\theta = 222^\circ$

f) i) $x = -1$, $y = -5$, $r = \sqrt{26}$

ii) $\theta = 259^\circ$

8. a) i) $\theta = 59^\circ$

ii) $\beta = 59^\circ$

b) i) $\theta = 127^\circ$

ii) $\beta = 53^\circ$

c) i) $\theta = 342^\circ$

ii) $\beta = 18^\circ$

d) i) $\theta = 227^\circ$

ii) $\beta = 47^\circ$

e) i) $\theta = 275^\circ$

ii) $\beta = 85^\circ$

f) i) $\theta = 112^\circ$

ii) $\beta = 68^\circ$