

Chapter 5 Review Extra Practice Answers

1. a) $x = 4$
b) $\csc \theta = \frac{5}{3}$, $\sec \theta = \frac{5}{4}$, $\cot \theta = \frac{4}{3}$
c) $\theta = 37^\circ$
2. For each triangle:
i) Calculate the exact value of x .
ii) Calculate the exact area.
- a) i) $x = 3\sqrt{2}$
ii) 9 units^2
b) i) $x = \frac{11}{2}\sqrt{3}$
ii) $\frac{121}{8}\sqrt{3}$
3. a) $\theta = 120^\circ, 240^\circ$
b) $\theta = 45^\circ, 225^\circ$
c) $\theta = 30^\circ, 150^\circ$
4. Given the following coordinates:
i) Determine the value of r to the nearest tenth.
ii) State the primary trigonometric ratios for angle θ .
iii) State the value θ to the nearest degree if $0^\circ \leq \theta \leq 360^\circ$.
- a) i) $r = 3.6$
ii) $\sin \theta = \frac{3}{3.6}$, $\cos \theta = \frac{2}{3.6}$, $\tan \theta = \frac{3}{2}$
iii) $\theta = 56^\circ$
- b) i) $r = 10.3$
ii) $\sin \theta = \frac{5}{10.3}$, $\cos \theta = -\frac{9}{10.3}$,
 $\tan \theta = -\frac{5}{9}$
iii) $\theta = 151^\circ$
- c) i) $r = 5.7$
ii) $\sin \theta = -\frac{4}{5.7}$, $\cos \theta = -\frac{4}{5.7}$, $\tan \theta = 1$
iii) $\theta = 225^\circ$
- d) i) $r = 8.5$
ii) $\sin \theta = -\frac{3}{8.5}$, $\cos \theta = \frac{8}{8.5}$, $\tan \theta = -\frac{3}{8}$
iii) $\theta = 339^\circ$
5. a) $\sin \theta$
b) $\sec \theta$
6. a) $(\tan \theta + 6)(\tan \theta - 6)$
b) $(\sin \theta - 4)^2$
7. $BC = 7.43 \text{ m}$, $AD = 8.31 \text{ m}$
8. $h = 25.2 \text{ m}$
9. $d = 52 \text{ m}$, $b = 106 \text{ m}$