

Lesson 5.4 Extra Practice Answers

1. a) Quadrant 2
b) Quadrant 4
c) Quadrant 2
d) Quadrant 3
2. a) i) $r = 5.8$
ii) $\sin \theta = \frac{3}{5.8}, \cos \theta = \frac{5}{5.8}, \tan \theta = \frac{3}{5}$
b) i) $r = 2.8$
ii) $\sin \theta = -\frac{2}{2.8}, \cos \theta = -\frac{2}{2.8}, \tan \theta = 1$
c) i) $r = 7.6$
ii) $\sin \theta = \frac{3}{7.6}, \cos \theta = -\frac{7}{7.6}, \tan \theta = -\frac{3}{7}$
d) i) $r = 4.5$
ii) $\sin \theta = -\frac{2}{4.5}, \cos \theta = \frac{4}{4.5}, \tan \theta = -\frac{2}{4}$
e) i) $r = 8.0$
ii) $\sin \theta = 0, \cos \theta = -1, \tan \theta = 0$
f) i) $r = 15.0$
ii) $\sin \theta = \frac{9}{15}, \cos \theta = -\frac{12}{15}, \tan \theta = -\frac{9}{12}$
3. a) $\sin \theta = 0.99, \cos \theta = -0.12,$
 $\tan \theta = -8.14$
b) $\sin \theta = -0.87, \cos \theta = \frac{1}{2}, \tan \theta = -1.73$
c) $\sin \theta = 0.24, \cos \theta = -0.97,$
 $\tan \theta = -0.25$
d) $\sin \theta = -0.34, \cos \theta = -0.94,$
 $\tan \theta = 0.36$
e) $\sin \theta = 0.91, \cos \theta = 0.41,$
 $\tan \theta = 2.25$
f) $\sin \theta = -0.71, \cos \theta = 0.71,$
 $\tan \theta = -1$
4. a) $x = 3, y = -4, r = 5$
b) $x = 7, y = -6\sqrt{2}, r = 11$
c) $x = 12, y = -16, r = 20$
d) $x = 10, y = -5, r = 5\sqrt{5}$
e) $x = 3\sqrt{5}, y = -6, r = 9$
f) $x = 2, y = -\sqrt{21}, r = 5$
5. a) $\theta = 51^\circ, 309^\circ$
b) $\theta = 74^\circ, 254^\circ$
c) $\theta = 218^\circ, 322^\circ$
d) $\theta = 114^\circ, 294^\circ$
e) $\theta = 79^\circ, 281^\circ$
f) $\theta = 191^\circ, 349^\circ$
6. a) $\theta = 139^\circ, 221^\circ$
b) $\theta = 124^\circ, 236^\circ$
c) $\theta = 14^\circ, 166^\circ$
d) $\theta = 39^\circ, 219^\circ$
e) $\theta = 199^\circ, 341^\circ$
f) $\theta = 58^\circ, 238^\circ$
7. a) $\theta = 135^\circ$
b) $\theta = 36^\circ$
c) $\theta = 180^\circ$
d) $\theta = 236^\circ$
e) $\theta = 315^\circ$
f) $\theta = 270^\circ$