

PreCalculus 11
Practice WS 6.5

Show all work and answers on separate paper.

Part I

Solve to the nearest degree, $0 \leq \theta < 360^\circ$, if θ is an angle in standard position with a terminal arm point:

1. $(5, -2)$
2. $(2, 7)$
3. $(-3, 10)$

Part II

Solve to the nearest degree. $0 \leq \theta < 360^\circ$

4. $\cos^2 \theta = \frac{4}{25}$
5. $4 \tan^2 \theta + 1 = 7$
6. $4 \sin^2 \theta + 1 = 7$

Part III

Solve without the aid of a calculator to the nearest degree. $0^\circ \leq \theta < 360^\circ$

7. $\sin \theta = -\frac{1}{\sqrt{2}}$
8. $\tan \theta = 1$
9. $\tan \theta = \frac{1}{\sqrt{3}}$
10. $\sin \theta = 0$
11. $\cos \theta = 1$
12. $3 \tan \theta + 4 = 1$
13. $1 - 10 \sin \theta = 6$
14. $5 \cos \theta - 1 = 3 \cos \theta$
15. $3 \cos \theta + 1 = 4 \cos \theta + 2$
16. $4 \sin^2 \theta + 1 = 4$

KEY

1. 338°
2. 74°
3. 107°
4. $66^\circ, 114^\circ, 246^\circ, 294^\circ$
5. $51^\circ, 129^\circ, 231^\circ, 309^\circ$
6. No solution
7. $225^\circ, 315^\circ$
8. $45^\circ, 225^\circ$
9. $30^\circ, 210^\circ$
10. $0^\circ, 180^\circ$
11. 0°
12. $135^\circ, 315^\circ$
13. $210^\circ, 330^\circ$
14. $60^\circ, 300^\circ$
15. 180°
16. $60^\circ, 120^\circ, 240^\circ, 300^\circ$