

Answers

1. a) 68° b) 25° c) 70° d) 74°
2. a) $-245^\circ, 475^\circ$ b) $-322^\circ, 398^\circ$ c) $-136^\circ, 584^\circ$ d) $-495^\circ, 225^\circ$
3. a) $115^\circ \pm 360^\circ, n \in N$ b) $38^\circ \pm 360^\circ, n \in N$ c) $224^\circ \pm 360^\circ, n \in N$ d) $-135^\circ \pm 360^\circ, n \in N$
4. a) no b) yes
5. a) $x = -\frac{2}{\sqrt{5}}$ b) $y = -\frac{\sqrt{43}}{7}$
6. a) $\sin 150^\circ = \frac{1}{2}$ b) $\cos 225^\circ = -\frac{1}{\sqrt{2}}$ c) $\tan 300^\circ = -\sqrt{3}$
7. a) $\theta_1 = 135^\circ$ and $\theta_2 = 315^\circ$ b) $\theta_1 = 30^\circ$ and $\theta_2 = 330^\circ$
c) $\theta_1 = 30^\circ$ and $\theta_2 = 150^\circ$ d) $\theta_1 = 120^\circ$ and $\theta_2 = 300^\circ$
8. $\sin \theta = \sqrt{3}$ $\cos \theta = -\frac{2\sqrt{3}}{3}$ $\tan \theta = -\frac{3}{2}$
9. $\sin \theta = \frac{-7\sqrt{53}}{53}$ $\cos \theta = \frac{2\sqrt{53}}{53}$ $\tan \theta = -\frac{7}{2}$
10. Since $\angle A$ is obtuse and $a > b$, there is one solution.
11. $c = 44.5 \text{ cm}$
12. $\angle Q = 59^\circ$
13. $d = 14.8$