

Practice 4.1 Angle Measurement Worksheet

Convert to radians:

1. $35^\circ \left(\frac{\pi}{180^\circ}\right) = \frac{7\pi}{36}$

2. $-410^\circ \left(\frac{\pi}{180^\circ}\right) = -\frac{41\pi}{18}$

3. $140^\circ \left(\frac{\pi}{180^\circ}\right) = \frac{7\pi}{9}$

Convert to degrees:

4. $\frac{5\pi}{8} \left(\frac{180^\circ}{\pi}\right) = 112.5^\circ$

5. $-\frac{7\pi}{6} \left(\frac{180^\circ}{\pi}\right) = -210^\circ$

6. $\frac{11\pi}{3} \left(\frac{180^\circ}{\pi}\right) = 660^\circ$

Find two other angles, one negative and one positive, which are coterminal to θ .

7. $\theta = -60^\circ$
 $+300^\circ$ or -420°

8. $\theta = 210^\circ$
 $+570^\circ$ or -150°

9. $\theta = \frac{7\pi}{3} \pm \frac{6\pi}{3}$
 $\frac{13\pi}{3}$ or $\frac{\pi}{3}$
 $-\frac{5\pi}{3}$

10. $\theta = -\pi \pm 2\pi$
 -3π or π

11. $\theta = -\frac{10\pi}{11} \pm \frac{22\pi}{11}$
 $\frac{12\pi}{11}$ or $-\frac{32\pi}{11}$

12. Draw each angle in standard position, and find its reference angle.

