Chapter 3 Pre-Quiz: Degrees

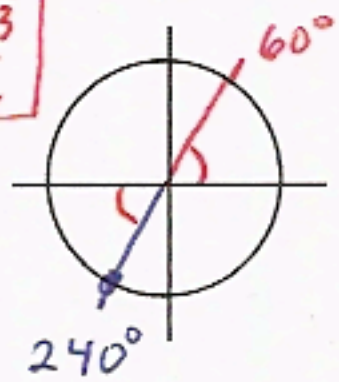
Answers

1. sin (240°) $= \boxed{-\frac{\sqrt{3}}{2}}$

a) 240° in Q III, related to 60°

b) sine is negative in Q III, and

c) $\sin 60° = \frac{\sqrt{3}}{2}$

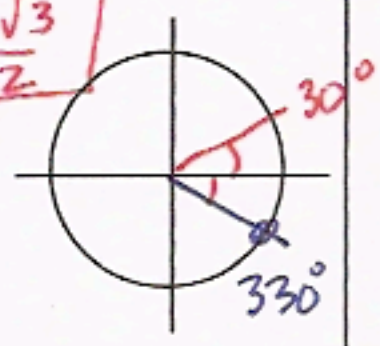


2. cos (330°) $= \boxed{+\frac{\sqrt{3}}{2}}$

a) 330° in Q IV related to 30°

b) cosine is positive in Q IV, and

c) $\cos(30°) = \frac{\sqrt{3}}{2}$

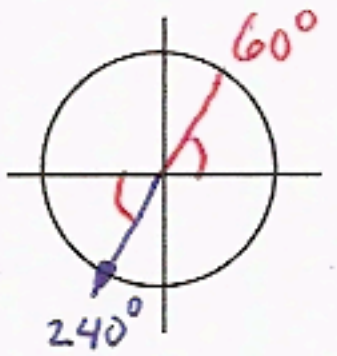


3. tan (240°) $= \boxed{+\sqrt{3}}$

a) 240° in Q III related to 60°

b) tangent is positive in Q III, and

c) $\tan 60° = \sqrt{3}$

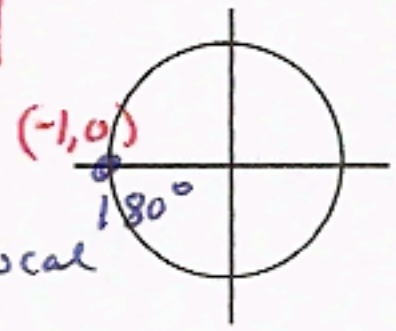


4. sec (180°) $= \boxed{-1}$

a) 180° is on neg. x-axis

b) sec θ is reciprocal of cos θ;

c) $\cos 180° = -1$, so $\sec 180° = \frac{-1}{1} = -1$

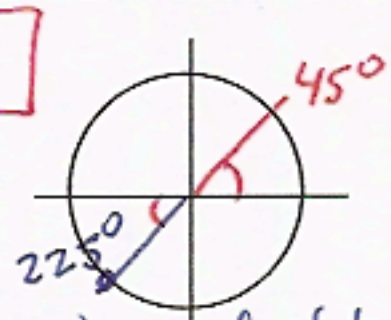


5. cot (225°) $= \boxed{+1}$

a) 225° in Q III related to 45°

b) cot(θ) is pos. in Q III and is reciprocal of tan θ;

c) $\tan 45° = 1$, so $\cot 45° = \frac{1}{1} = 1$.

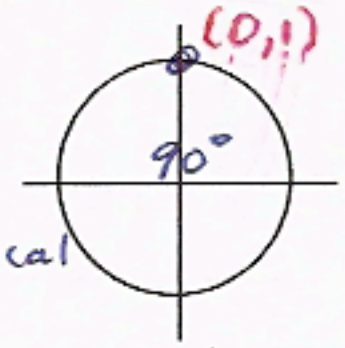


6. csc (90°) $= \boxed{+1}$

a) 90° is on pos. y-axis

b) csc θ is reciprocal of sin θ;

c) $\sin 90° = 1$, so $\csc 90° = \frac{1}{1} = 1$.

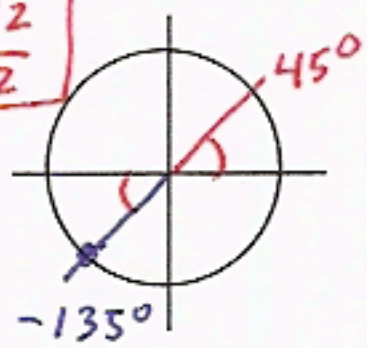


7. cos (-135°) $= \boxed{-\frac{\sqrt{2}}{2}}$

a) -135° in Q III related to 45°

b) cos θ is neg. in Q III;

c) $\cos 45° = \frac{\sqrt{2}}{2}$

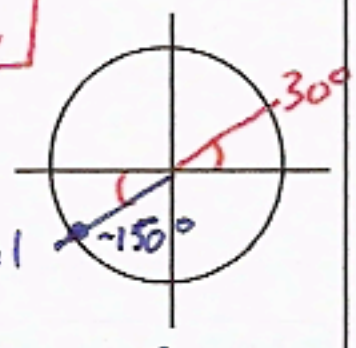


8. csc (-150°) $= \boxed{-2}$

a) -150° in Q III related to 30°

b) csc θ is reciprocal of sin θ;

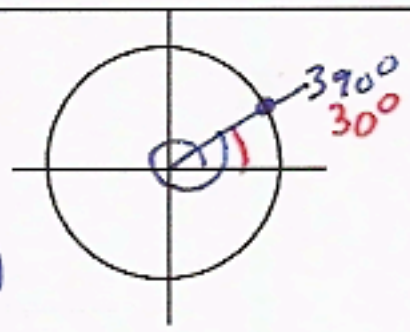
c) $\sin 30° = \frac{1}{2}$, so $\csc 30° = 2$, but is negative in Q III



9. tan (390°) $= \boxed{+\frac{\sqrt{3}}{3}}$

a) 390° is 30° more than 360°, so it is in Q I (positive)

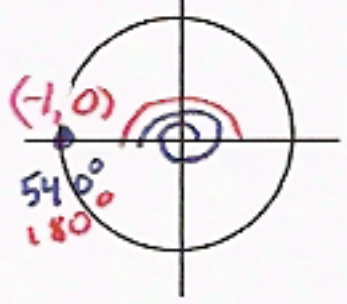
b) $\tan 30° = \frac{\sqrt{3}}{3}$



10. sin (540°) $= \boxed{0}$

a) $540° - 360° = 180°$

b) sin θ is y, so $\sin 180° = 0$



Note: The arguments (degrees) for these were random, and we didn't see some trig values, such as any UNDEFINED. However, be ready for anything.