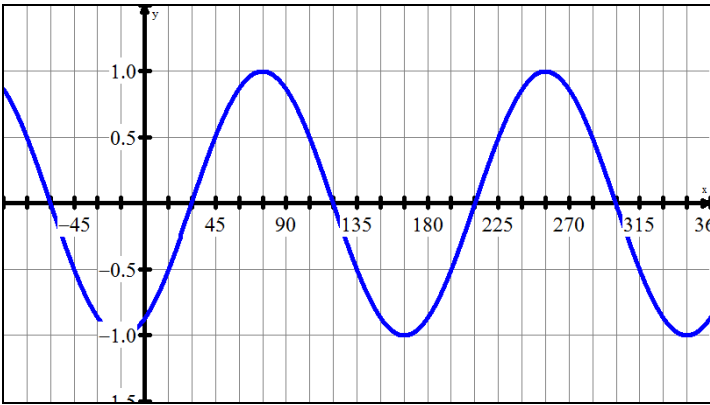


(A) Sinusoidal Functions → Role of k & C



(B) Sine Law, Area, Ambiguous Case

(C) Cosine Law

(D) Angles in Standard Position (From Nelson 11, Chap 5.2, p423)

14. Check Your Understanding: Point P (-5, -9) is on the terminal arm of an angle, θ , in standard position. Explain the role of the right triangle and the related acute angle in determining (i) the primary trig ratios of the principal angle and (ii) then the value of the principal value of θ .
15. Point P (-5, 8) is on the terminal arm of an angle, θ , in standard position. For this angle, θ , present a drawing of an angle in standard position, showing the principle angle, reference angle (related acute angle) and then determine all values of θ for $-540^\circ < \theta \leq 270^\circ$.

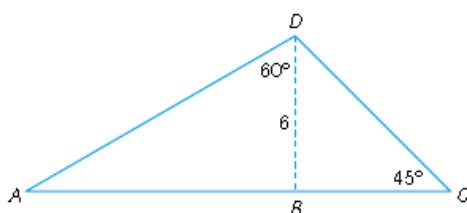
(E) Special Right Triangles (From Nelson 11, Chap 6.3, p533)

3. Determine the exact value. (a) $\cos(30^\circ)$ (b) $\tan(-60^\circ)$ (c) $\sin(-45^\circ)$

4. Determine the exact value. (a) $\tan(-150^\circ)$ (b) $\sin(-240^\circ)$ (c) $\cos(315^\circ)$

15. Check Your Understanding

(a) Determine the exact measure of each unknown side length in the diagram.



(b) Find the exact value of the sine, cosine, and tangent of $\angle A$ and $\angle C$.

(F) Solving Linear Trig Equations

12. Use special triangles to determine the roots of each equation, $0^\circ \leq \theta \leq 360^\circ$.

(a) $\tan \theta = -1$

(b) $\sin \theta = \frac{1}{\sqrt{2}}$

(c) $\cos \theta = \frac{-\sqrt{3}}{2}$

(d) $\sin \theta = \frac{\sqrt{3}}{2}$

(e) $\cos \theta = \frac{1}{\sqrt{2}}$

(f) $\tan \theta = -\sqrt{3}$

(g) $\sin \theta = \frac{1}{2}$

(h) $\tan \theta = \frac{-1}{\sqrt{3}}$

23. Check Your Understanding

- (a) For $2 \cos \theta + 3 = 4$, how many solutions are possible if the domain is $0 \leq \theta \leq 2\pi$?
- (b) Solve the equation $2 \cos \theta + 3 = 4$ for $0 \leq \theta \leq 2\pi$, without using a calculator or graphing technology.
- (c) Verify the solutions you found for the equation in (b) by using graphing technology.

C

24. Solve $\cos \theta - \sin \theta = 0$ for $0 \leq \theta \leq 2\pi$, without using graphing technology.
25. Solve $\sin (2\theta - 20^\circ) = \frac{1}{2}$ for $0^\circ \leq \theta \leq 360^\circ$, without using graphing technology.