Trig   Review 7.1-7.4

Use the sum and difference identities (sin, cos, tan)

Use the double angle and half angle identities (sin, cos, tan)

Quiz 7.3-7.4
Test Tues. MCT 7.1-7.4
You will have (my) parking lot

Use the given information to determine the trigonometric value. In each case, $0° < \theta < 90°$.

11. If $\sin \theta = \dfrac{1}{2}$, find $\csc \theta$.

12. If $\tan \theta = 4$, find $\sec \theta$.

13. If $\csc \theta = \dfrac{5}{3}$, find $\cos \theta$.

Verify that each equation is an identity.

16. $\cos^2 x + \tan^2 x \cos^2 x = 1$

17. $\frac{1 - \cos\theta}{1 + \cos\theta} = (\csc\theta - \cot\theta)^2$

$$= \left(\frac{1}{\sin\theta} - \frac{\cos\theta}{\sin\theta} \right)^2$$

$$= \left(\frac{1 - \cos\theta}{\sin\theta} \right)^2$$

$$= \frac{(1 - \cos\theta)^2}{(\sin\theta)^2}$$

$$\frac{1 - \cos\theta}{1 + \cos\theta} = \frac{(1 - \cos\theta)^2}{(1 - \cos^2\theta)}$$

$$\frac{1 - \cos\theta}{1 + \cos\theta} = \frac{(1 - \cos\theta)(1 - \cos\theta)}{(1 - \cos\theta)(1 + \cos\theta)}$$

$$\cos^2\theta + \tan^2\theta \cos^2\theta = 1$$

$$\cos^2\theta (1 + \tan^2\theta) = 1$$

$$\cos^2\theta \cdot \sec^2\theta = 1$$

$$\cos^2\theta \cdot \frac{1}{\cos^2\theta} = 1$$

$$1 = 1$$

Use sum or difference identities to find the exact value of each trigonometric function.

20. cos 195°

21. cos 15°

Find each exact value if $0 < x < \frac{\pi}{2}$
and $0 < y < \frac{\pi}{2}$.

24. $\cos(x - y)$ if $\sin x = \frac{7}{25}$ and $\cos y = \frac{2}{3}$

If θ is an angle in the first quadrant and $\cos \theta = \frac{3}{5}$, find the exact value of each function.

30. $\sin 2\theta$ **31.** $\cos 2\theta$

Use a half-angle identity to find the exact value of each function.

26. $\cos 75°$

27. $\sin \dfrac{7\pi}{8}$