Kuta Software - Infinite Algebra 2

Name_____

Angle Sum/Difference Identities

Date_____ Period_____

Use the angle sum identity to find the exact value of each.

1) cos 105°

2) sin 195°

3) cos 195°

4) cos 165°

5) cos 285°

6) cos 255°

7) sin 105°

8) sin 285°

9) cos 75°

10) sin 255°

Use the angle difference identity to find the exact value of each.

11) cos 75°

12) cos −15°

13) $\tan 75°$

14) $\cos 15°$

15) $\tan -105°$

16) $\sin 105°$

17) $\tan 15°$

18) $\sin 15°$

19) $\tan -15°$

20) $\sin -75°$

Use the angle sum or difference identity to find the exact value of each.

21) $\sin -105°$

22) $\cos 195°$

23) $\cos \dfrac{7\pi}{12}$

24) $\tan \dfrac{13\pi}{12}$

25) $\sin \dfrac{\pi}{12}$

26) $\cos -\dfrac{7\pi}{12}$

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Name_____

Angle Sum/Difference Identities

Date_____ Period____

Use the angle sum identity to find the exact value of each.

1) $\cos 105°$

$$\frac{\sqrt{2} - \sqrt{6}}{4}$$

2) $\sin 195°$

$$\frac{\sqrt{2} - \sqrt{6}}{4}$$

3) $\cos 195°$

$$\frac{-\sqrt{6} - \sqrt{2}}{4}$$

4) $\cos 165°$

$$\frac{-\sqrt{6} - \sqrt{2}}{4}$$

5) $\cos 285°$

$$\frac{\sqrt{6} - \sqrt{2}}{4}$$

6) $\cos 255°$

$$\frac{\sqrt{2} - \sqrt{6}}{4}$$

7) $\sin 105°$

$$\frac{\sqrt{6} + \sqrt{2}}{4}$$

8) $\sin 285°$

$$\frac{-\sqrt{6} - \sqrt{2}}{4}$$

9) $\cos 75°$

$$\frac{\sqrt{6} - \sqrt{2}}{4}$$

10) $\sin 255°$

$$\frac{-\sqrt{6} - \sqrt{2}}{4}$$

Use the angle difference identity to find the exact value of each.

11) $\cos 75°$

$$\frac{\sqrt{6} - \sqrt{2}}{4}$$

12) $\cos -15°$

$$\frac{\sqrt{6} + \sqrt{2}}{4}$$

13) tan 75°

$2 + \sqrt{3}$

14) cos 15°

$\dfrac{\sqrt{6} + \sqrt{2}}{4}$

15) tan −105°

$2 + \sqrt{3}$

16) sin 105°

$\dfrac{\sqrt{6} + \sqrt{2}}{4}$

17) tan 15°

$2 − \sqrt{3}$

18) sin 15°

$\dfrac{\sqrt{6} − \sqrt{2}}{4}$

19) tan −15°

$\sqrt{3} − 2$

20) sin −75°

$\dfrac{−\sqrt{6} − \sqrt{2}}{4}$

Use the angle sum or difference identity to find the exact value of each.

21) sin −105°

$\dfrac{−\sqrt{6} − \sqrt{2}}{4}$

22) cos 195°

$\dfrac{−\sqrt{6} − \sqrt{2}}{4}$

23) $\cos \dfrac{7\pi}{12}$

$\dfrac{\sqrt{2} − \sqrt{6}}{4}$

24) $\tan \dfrac{13\pi}{12}$

$2 − \sqrt{3}$

25) $\sin \dfrac{\pi}{12}$

$\dfrac{\sqrt{6} − \sqrt{2}}{4}$

26) $\cos −\dfrac{7\pi}{12}$

$\dfrac{\sqrt{2} − \sqrt{6}}{4}$