Practice #12 Alg 2 Unit Circle Tuesday, March 31, 2020

Find the EXACT value of each using the Unit Circle. You can find a copy of the Unit Circle on my blog post for today.

1. $\sin 210^\circ$

2. $\cos 300^0$

3. $\sin 135^\circ$

4. $\cos 360^\circ$

5. $\sin 180^\circ$

6. $\cos 270^\circ$

For the remaining problems first find an angle that is coterminal to the given angle and can be found on the Unit Circle then evalute the given function using that coterminal angle.

7. $\sin 1290^\circ$

8. $\cos(-495^\circ)$

9 $\sin 810^\circ$

10. $\cos(-900^\circ)$

11. $\sin(-660^\circ)$

12. $\cos 1230^\circ$

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ANSWERS

Find the EXACT value of each using the Unit Circle. You can find a copy of the Unit Circle on my blog post for today.

1. $\sin 210° = -\frac{1}{2}$

y-coord at 210°

2. $\cos 300° = \frac{1}{2}$

x-coord at 300°

3. $\sin 135° = \frac{\sqrt{2}}{2}$

y-coord at 135°

4. $\cos 360° = 1$

x-coord at 360°

5. $\sin 180° = 0$

y-coord at 180°

6. $\cos 270° = 0$

x-coord at 270°

For the remaining problems first find an angle that is coterminal to the given angle and can be found on the Unit Circle then evalute the given function using that coterminal angle.

7. $\sin 1290° = -\frac{1}{2}$

$1290 - 1080 = 210°$

$\sin 1290° = \sin 210°$

$= $ y-coord at 210°

8. $\cos(-495°) = -\frac{\sqrt{2}}{2}$

$-495 + 720$

$= 225$

$\cos(-495°) = \cos 225°$

$= $ x-coord at 225°

9. $\sin 810° = 1$

$810 - 720$

$= 90°$

$\sin 810° = \sin 90°$

$= $ y-coord at 90°

10. $\cos(-900°) = -1$

$-900 + 1080$

$= 180$

$\cos(-900°) = \cos 180°$

$= $ x-coord at 180°

11. $\sin(-660°) = \frac{\sqrt{3}}{2}$

$-660 + 720$

$= 60°$

$\sin(-660°) = \sin 60°$

$= $ y-coord at 60°

12. $\cos 1230° = -\frac{\sqrt{3}}{2}$

$1230 - 1080$

$= 150°$

$\cos 1230° = \cos 150°$

$= $ x-coord at 150°