5.4 review WS

Problems #1-3, 6, 7, 10-12, 14 are required for your class time today. Everything else is option.
If you are getting problems wrong, please do additional practice or come to flex time. This review will help prepare you for your quiz Friday.

Find the exact value of each trigonometric expression

1. $\cos\frac{7\pi}{12}$
2. $\sin 165^\circ$
3. $\tan 195^\circ$
4. $\sin\frac{17\pi}{12}$
5. $\tan 15^\circ$
6. $\sin 20^\circ \cos 10^\circ + \cos 20^\circ \sin 10^\circ$
7. $\frac{\tan\frac{\pi}{9} + \tan\frac{5\pi}{36}}{1 - \tan\frac{\pi}{9}\tan\frac{5\pi}{36}}$
8. $\cos\frac{9\pi}{8}\cos\frac{5\pi}{24} - \sin\frac{9\pi}{8}\sin\frac{5\pi}{24}$

Simplify each expression

9. $\cos 7x\cos 2x - \sin 7x\sin 2x$
10. $\sin 188^\circ \cos 53^\circ - \cos 188^\circ \sin 53$
11. $\cos 8x\sin 6x - \sin 8x\cos 6x$

Verify

12. $\sin\left(360^\circ + \theta\right) = \sin\theta$
13. $\sec\left(180^\circ - \theta\right) = -\sec\theta$

Find the solutions on the interval $[0, 2\pi]$

14. $\cos\left(\frac{5\pi}{4} + x\right) + \sin\left(\frac{5\pi}{4} - x\right) = 0$
15. $\sin\left(\frac{2\pi}{3} - x\right) + \sin\left(\frac{2\pi}{3} + x\right) = 0$
16. $\sin\left(\frac{3\pi}{2} + x\right) - \cos\left(\frac{\pi}{2} + x\right) = 0$