Section 5.4 HW Double Angles – Do problems on a separate sheet of lined paper

#8,10,16,18,20,22,24

Solving a Multiple-Angle Equation **In Exercises 7–14, find the exact solutions of the equation in the interval $[0, 2\pi)$.**

7. $\sin 2x - \sin x = 0$

8. $\sin 2x \sin x = \cos x$

9. $\cos 2x - \cos x = 0$

10. $\cos 2x + \sin x = 0$

11. $\sin 4x = -2 \sin 2x$

12. $(\sin 2x + \cos 2x)^2 = 1$

13. $\tan 2x - \cot x = 0$

14. $\tan 2x - 2 \cos x = 0$

Using a Double-Angle Formula **In Exercises 15–20, use a double-angle formula to rewrite the expression.**

15. $6 \sin x \cos x$

16. $\sin x \cos x$

17. $6 \cos^2 x - 3$

18. $\cos^2 x - \frac{1}{2}$

19. $4 - 8 \sin^2 x$

20. $10 \sin^2 x - 5$

Evaluating Functions Involving Double Angles **In Exercises 21–24, find the exact values of $\sin 2u$, $\cos 2u$, and $\tan 2u$ using the double-angle formulas.**

21. $\sin u = -3/5, \quad 3\pi/2 < u < 2\pi$

22. $\cos u = -4/5, \quad \pi/2 < u < \pi$

23. $\tan u = 3/5, \quad 0 < u < \pi/2$

24. $\sec u = -2, \quad \pi < u < 3\pi/2$