Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Advanced Functions and Modeling Unit 9 Homework 2**

**For each problem, graph both the parent function (**$y=\cos(x)$**) and the transformed function.**

1. $y=\cos(x+2)$ 2. $y=\cos(x-1 )$



3. $y=\frac{3}{2}\cos(x)$ 4. $y=-\cos(x)$

5. $y=\cos(\frac{x}{2})$ 6. $y=3\cos(2x)$

**Without graphing, state the period of each function.**

7. $y=\cos(3x)$ 8. $y=\cos(\left(\frac{x}{3}\right))$ 9. $y=\cos(\left(\frac{x}{2}\right))$

**Write the function for each cosine graph.**

10.  11. 12. 

**Graph each of the functions.**

13. $y=2\cos(x-1)$ 14. $y=-\cos(\frac{1}{2}x+2)$

