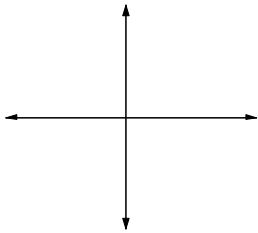
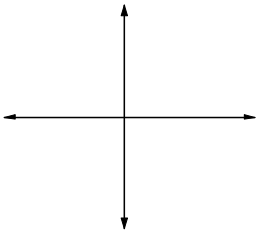
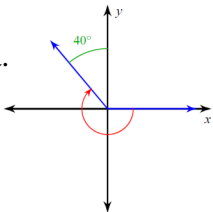
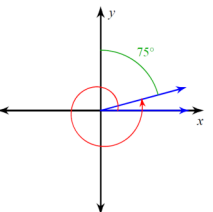
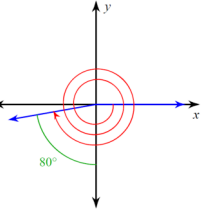


## Unit 8 Review

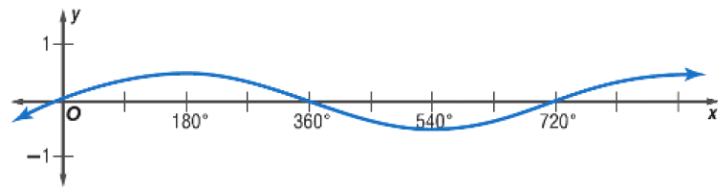
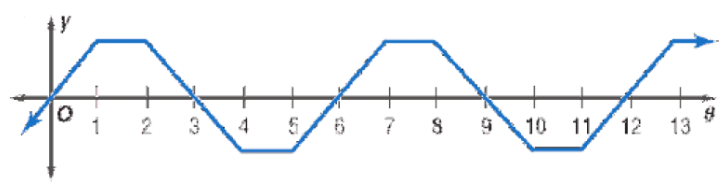
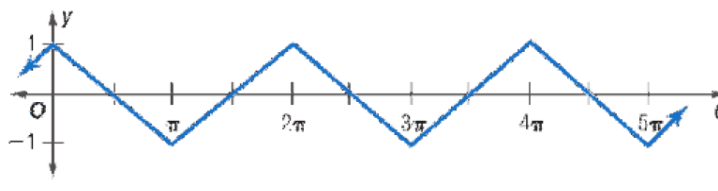
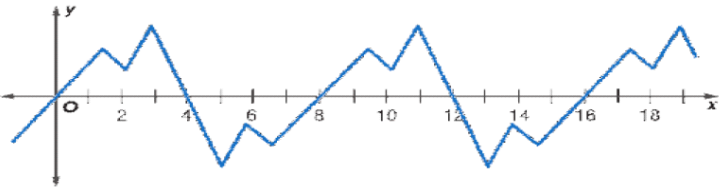
**Complete each problem involving angles and/or angle measure. Show work!**

|   |  |   |  |
|---|--|---|--|
| <p>1. Convert to radians:</p> <p>a. <math>216^\circ \rightarrow</math> _____</p> <p>b. <math>-320^\circ \rightarrow</math> _____</p>  | <p>2. Convert to degrees:</p> <p>a. <math>-\frac{32\pi}{45} \rightarrow</math> _____</p> <p>b. <math>\frac{23\pi}{12} \rightarrow</math> _____</p>   | <p>3. Draw: <math>\theta = 955^\circ</math></p>   | <p>4. Draw: <math>\theta = -\frac{127\pi}{30}</math></p>  |
| <p>5. Find positive and negative coterminal angle for given angle <math>\theta</math>.</p> <p>a. <math>\theta = 324^\circ \rightarrow</math> _____</p> <p>b. <math>\theta = \frac{77\pi}{90} \rightarrow</math> _____</p> | <p>6. Determine the measure of each angle.</p> <p>a. </p> <p>b. </p> <p>c. </p> <p>_____</p> | <p>7. Find the reference angle for given angle <math>\theta</math>.</p> <p>a. <math>\theta = 147^\circ \rightarrow</math> _____</p> <p>b. <math>\theta = -339^\circ \rightarrow</math> _____</p> <p>c. <math>\theta = 624^\circ \rightarrow</math> _____</p> <p>d. <math>\theta = -768^\circ \rightarrow</math> _____</p> |  |

**Complete each problem involving the Unit Circle.**

|  |  |   |
|--|--|---|
| <p>8. Find terminal point for <math>\theta</math>:</p> <p>a. <math>\theta = 210^\circ \rightarrow</math> _____</p> <p>b. <math>\theta = -405^\circ \rightarrow</math> _____</p> <p>c. <math>\theta = \frac{3\pi}{4} \rightarrow</math> _____</p> <p>d. <math>\theta = \frac{15\pi}{2} \rightarrow</math> _____</p> | <p>9. Find the angle on the unit circle:</p> <p>a. At terminal point <math>(\frac{1}{2}, -\frac{\sqrt{3}}{2})</math> and move <math>120^\circ</math> CCW <math>\rightarrow</math> _____</p> <p>b. At terminal point <math>(-1, 0)</math> and move <math>315^\circ</math> CW <math>\rightarrow</math> _____</p> | <p>10. Find exact value:</p> <p>a. <math>\sec 330^\circ =</math> _____</p> <p>b. <math>\tan -240^\circ =</math> _____</p> <p>c. <math>\sin 585^\circ =</math> _____</p> <p>d. <math>\cos \frac{11\pi}{6} =</math> _____</p> <p>e. <math>\cot -\frac{7\pi}{2} =</math> _____</p> <p>f. <math>\csc \frac{13\pi}{3} =</math> _____</p> |
|--|--|---|

**Determine if the following graphs are periodic. If so, state the period.**

|   |   |
|---|---|
| <p>11. Periodic: Yes No Period = _____</p>  | <p>12. Periodic: Yes No Period = _____</p>  |
| <p>13. Periodic: Yes No Period = _____</p>  | <p>14. Periodic: Yes No Period = _____</p>  |

**Graph each function by finding the amplitude, period, phase shift, and vertical shift.**

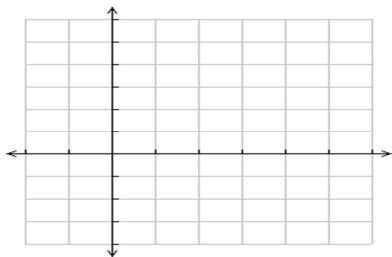
15.  $y = 2 \sin\left(x + \frac{\pi}{2}\right)$

Amplitude: \_\_\_\_\_

Period: \_\_\_\_\_

Phase Shift: \_\_\_\_\_

Vertical Shift: \_\_\_\_\_



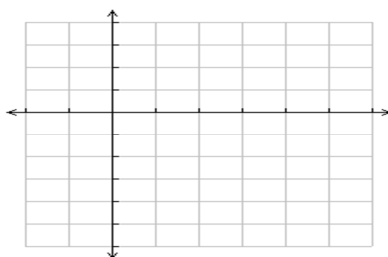
16.  $y = 4 \cos(x - \pi) - 2$

Amplitude: \_\_\_\_\_

Period: \_\_\_\_\_

Phase Shift: \_\_\_\_\_

Vertical Shift: \_\_\_\_\_



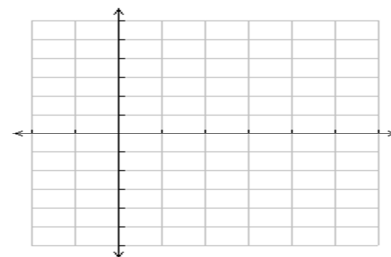
17.  $y = \tan\left(x - \frac{3\pi}{2}\right) + 4$

Amplitude: \_\_\_\_\_

Period: \_\_\_\_\_

Phase Shift: \_\_\_\_\_

Vertical Shift: \_\_\_\_\_



**Simplify each rational expression or solve each rational equation. (Review)**

18.  $\frac{x-4}{x^2-3x-4} \cdot \frac{x^2-10x+25}{10+3x-x^2}$

19.  $\frac{8x^2-32x}{x+6} \div \frac{12x-48}{x^2-x-42}$

20.  $\frac{6x}{x+2} + \frac{5x}{x-2}$

21.  $\frac{2x}{3} - \frac{4x-2}{x-1}$

22.  $\frac{x^2-8x+15}{9x-45} \cdot \frac{9x+9}{x+1}$

23.  $\frac{5}{2x} + \frac{5x}{6x+18}$

24.  $\frac{1}{x+6} + \frac{1}{x^2+4x-12} = \frac{6x+24}{x^2+4x-12}$

25.  $x + 2 = \frac{x-3}{x+1} + \frac{x^2+4x-12}{x+1}$

26.  $\frac{1}{3x-18} + \frac{2x^2+5x+2}{x^2-3x-18} = \frac{1}{3x^2-9x-54}$