Unit 3 (4.4a) **Vertical Transformations Skills Quiz Practice**

*Be able to graph all 6 parent functions: $\sin\theta$, $\cos\theta$

*Be able to graph vertical dilations and translations.

*Be able to write an equation from a graph.

*Be able to write an equation from given information.

Describe the transformations then graph.

1. $y = \cos\theta + 7$

2. $y = 9\sin\theta$

3. $y = \frac{1}{2}\sin\theta - 5$
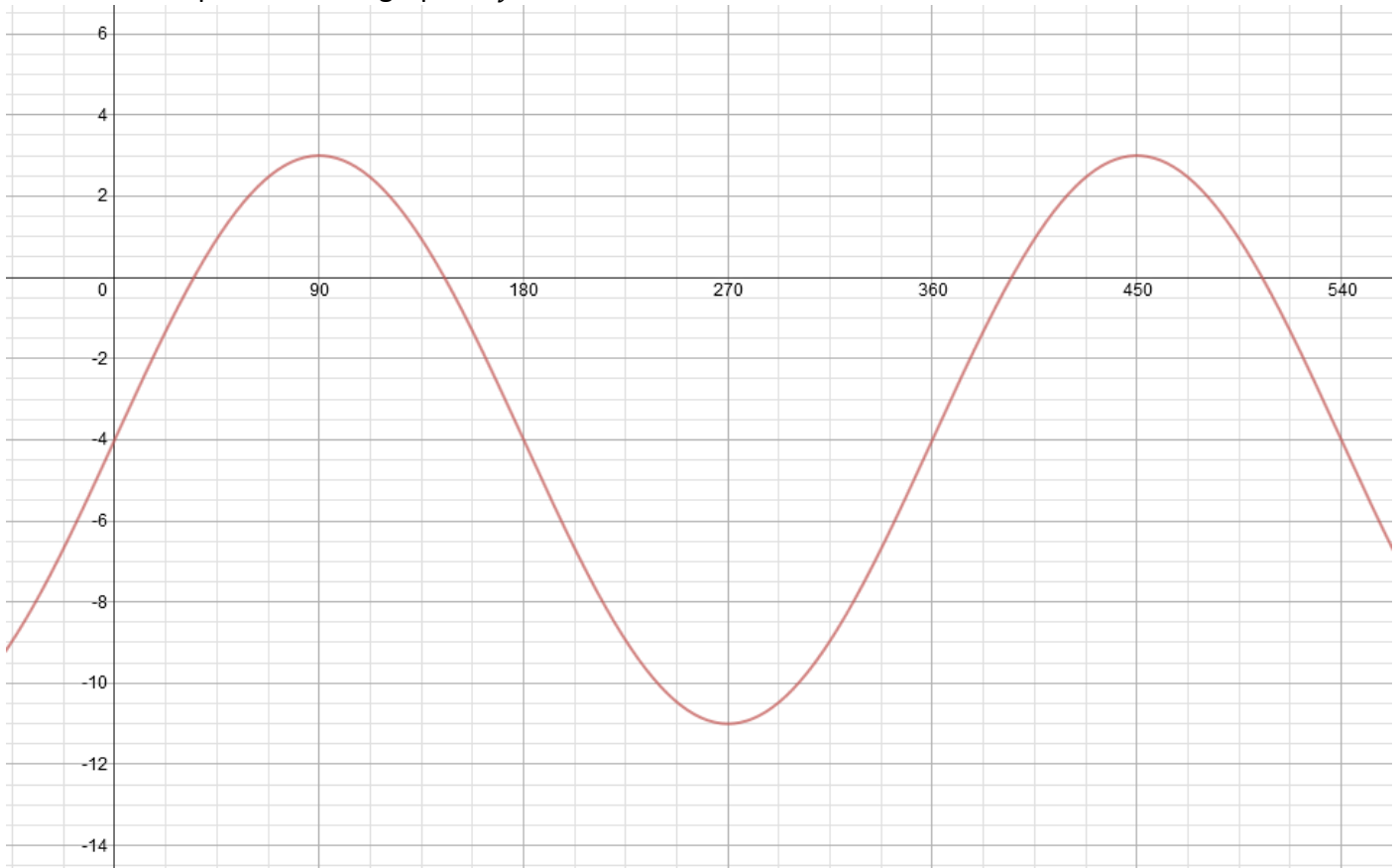
4. $y = -6\cos\theta + 2$

5. Write the equation of a sine curve with the following transformations:
    - Vertical dilation (v.d.) of 1.5
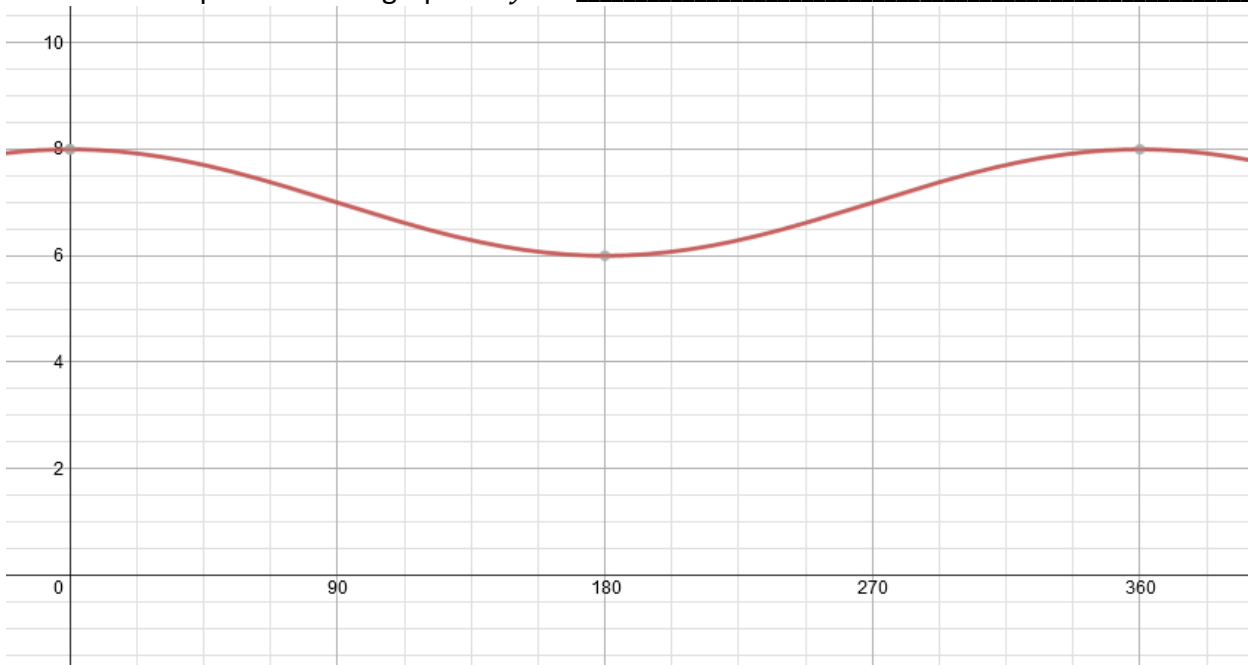   - Vertical translation (v.t.) of -2.5

6. Write the equation of a cosine curve with the following transformations:
    - Midline at $y = 47$
    - Amplitude of 10
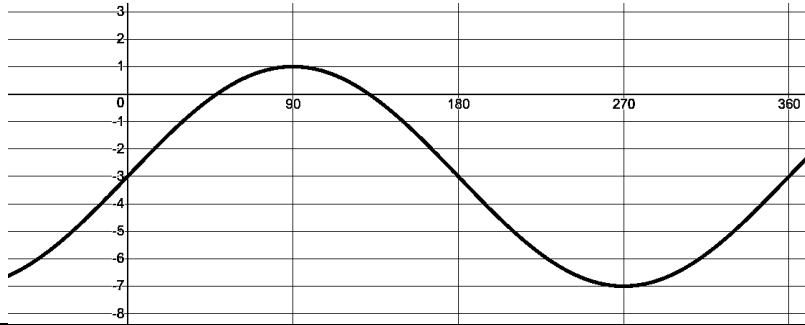   - Reflection

7. Write an equation of the graph. $y =$ _____

8. Write an equation of the graph. $y =$ _____
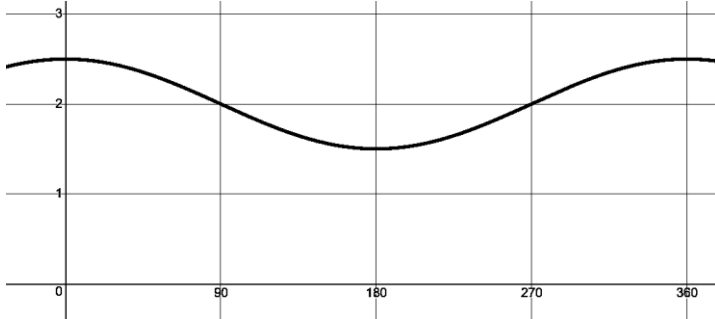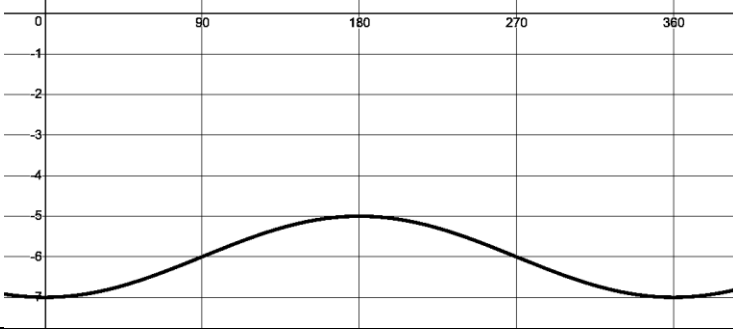
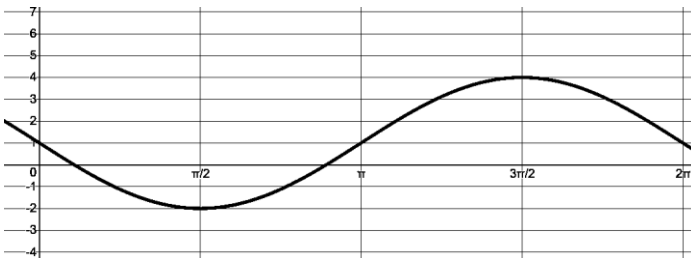Write an appropriate equation for each graph.

9.

10.

11.

12.

Write the equation then graph.

13.

_____

Cosine equation

Amplitude: $\frac{3}{2}$

Midline: -4

In radians

Write the equation then graph.

14.

_____

Sine equation

Vertical translation of 8

Vertical Dilation of 7

Reflection

In degrees