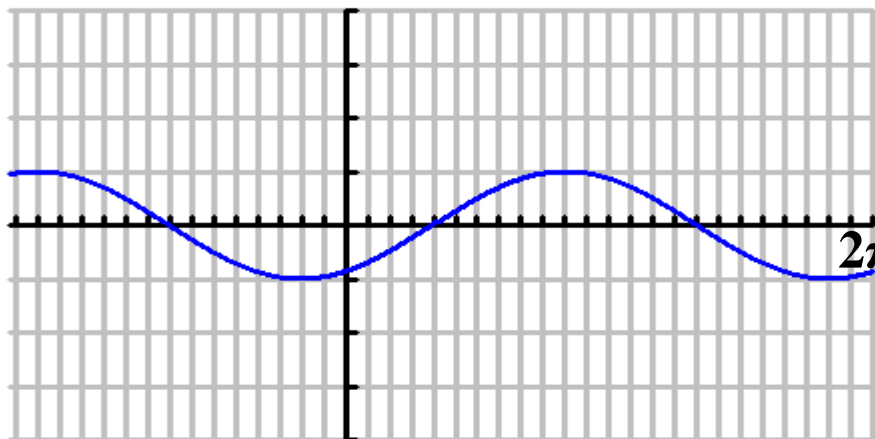


### Writing Equations for Sine and Cosine

For #'s 1-6, write an equation that could model the following transformations of  $y = \sin \theta$ .

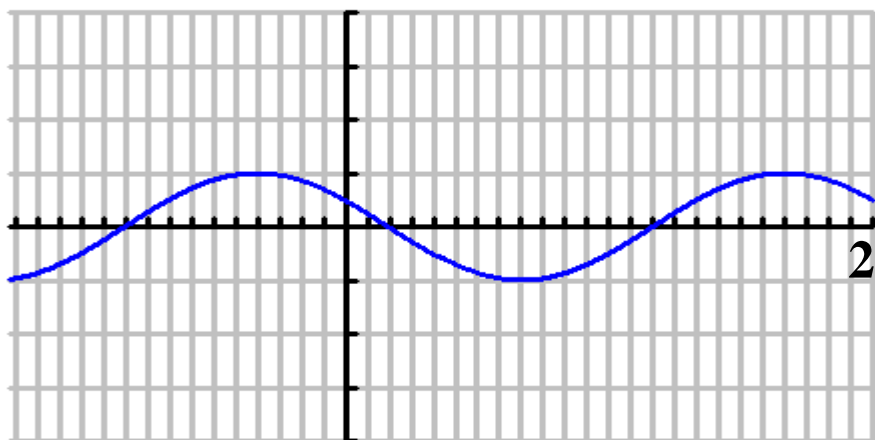
1.



Compare each new graph to your graph of  $\sin \theta$ !

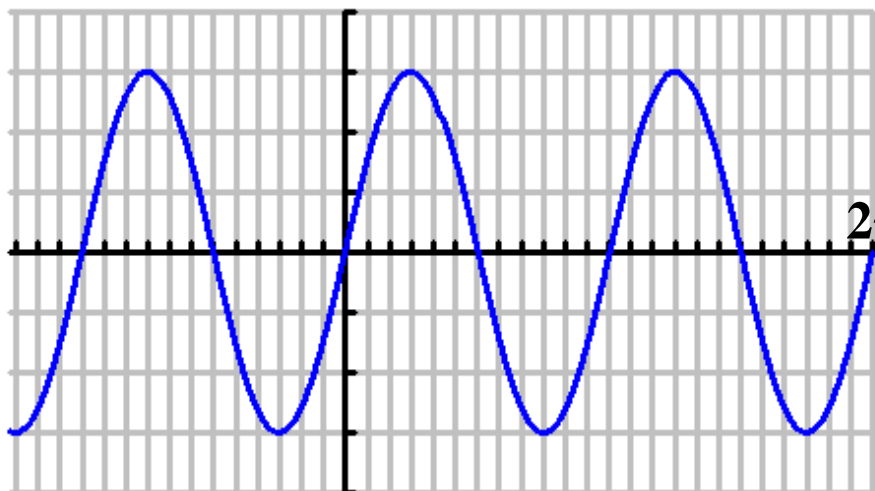
$y =$  \_\_\_\_\_

2.



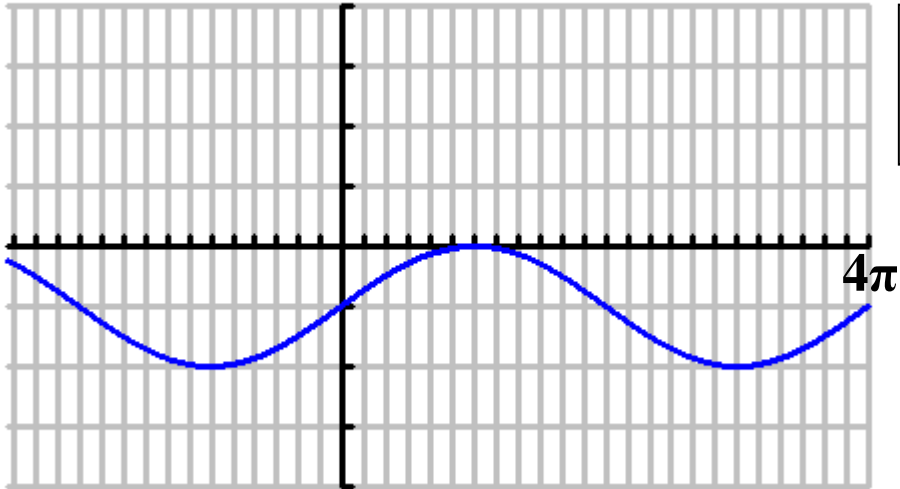
$y =$  \_\_\_\_\_

3.



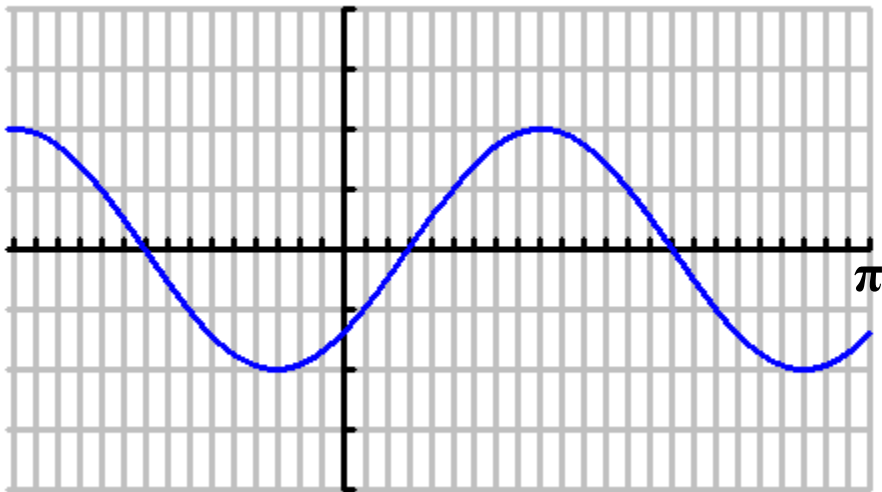
$y =$  \_\_\_\_\_

4.



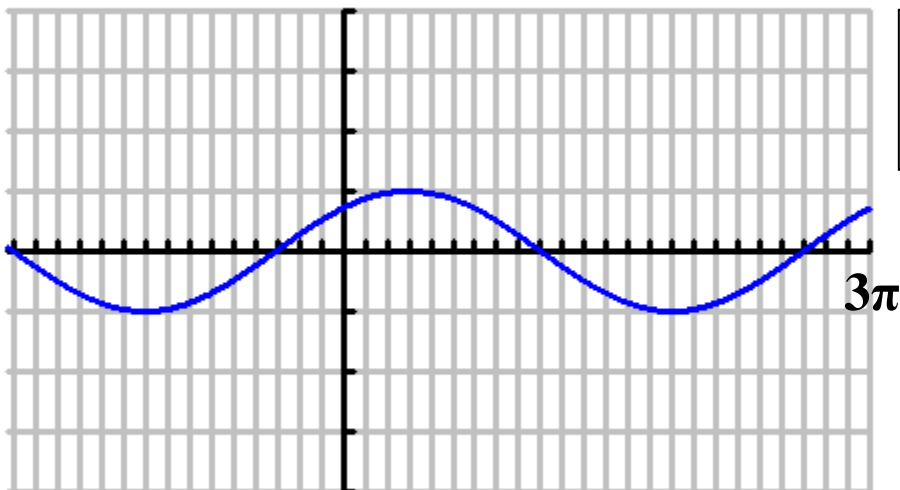
$y =$  \_\_\_\_\_

5.



$y =$  \_\_\_\_\_

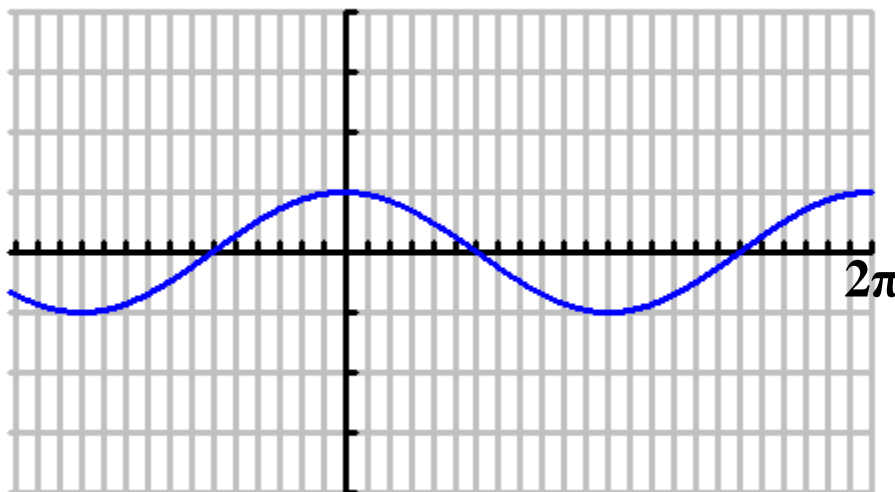
6.



$y =$  \_\_\_\_\_

For #'s 7-12, write an equation that could model the following transformations of  $y = \cos \theta$ .

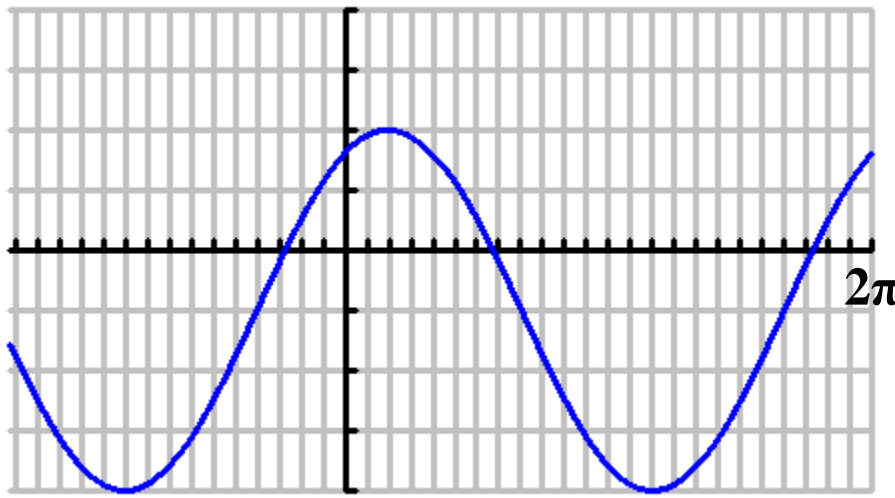
7.



This may not look like a transformation, but it is. What transformation would be equivalent to the original graph of  $\cos \theta$ ?

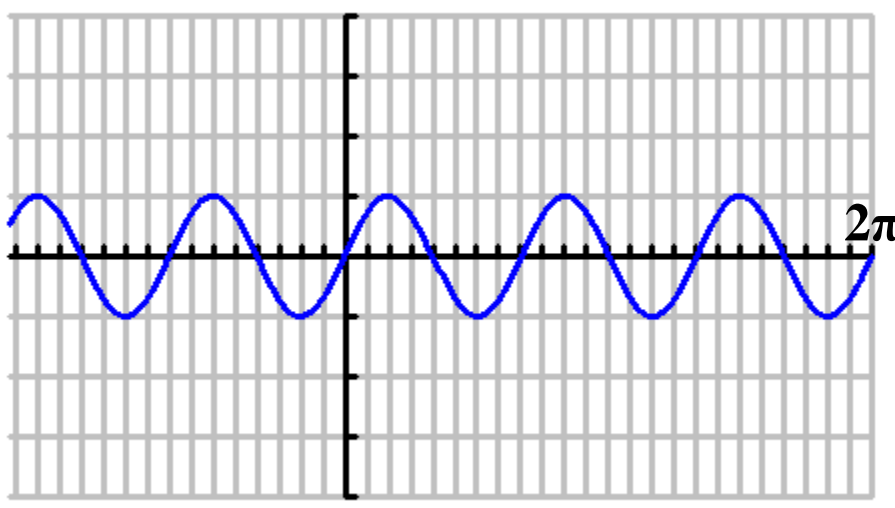
$y =$  \_\_\_\_\_

8.



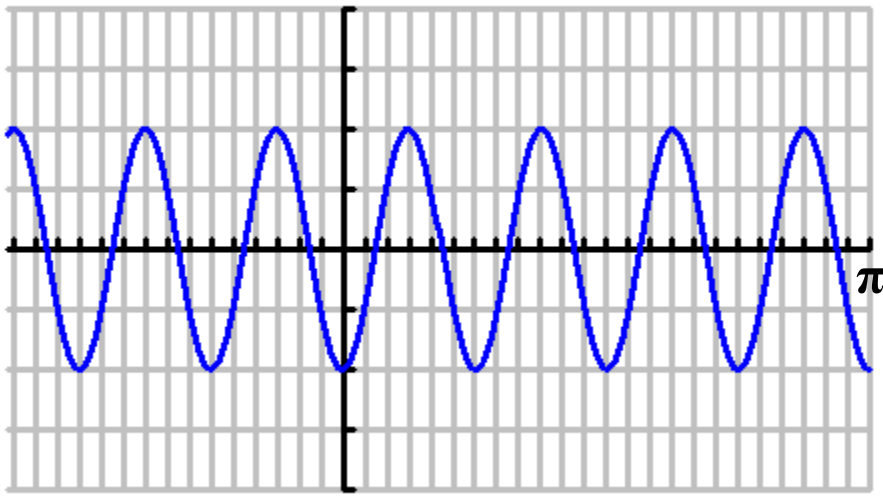
$y =$  \_\_\_\_\_

9.



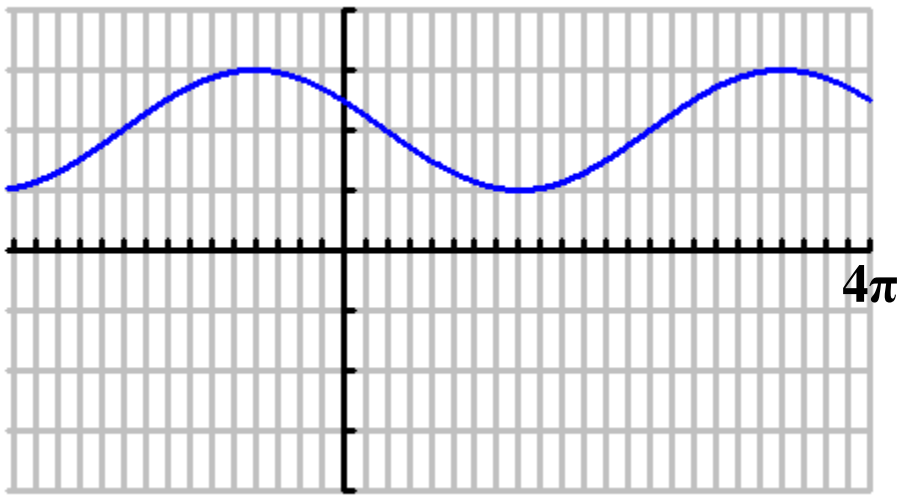
$y =$  \_\_\_\_\_

10.



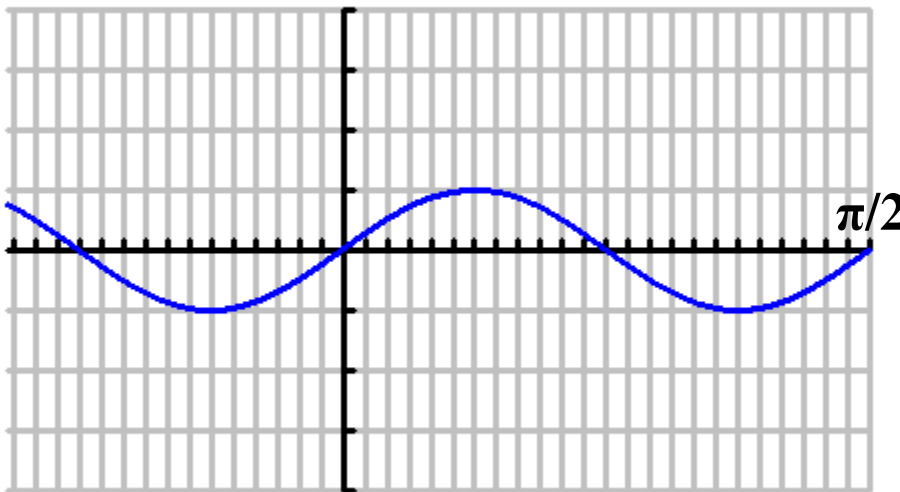
$y =$  \_\_\_\_\_

11.



$y =$  \_\_\_\_\_

12.



$y =$  \_\_\_\_\_