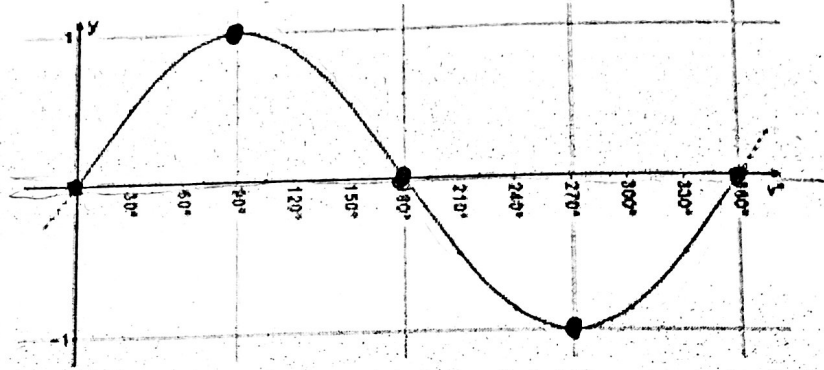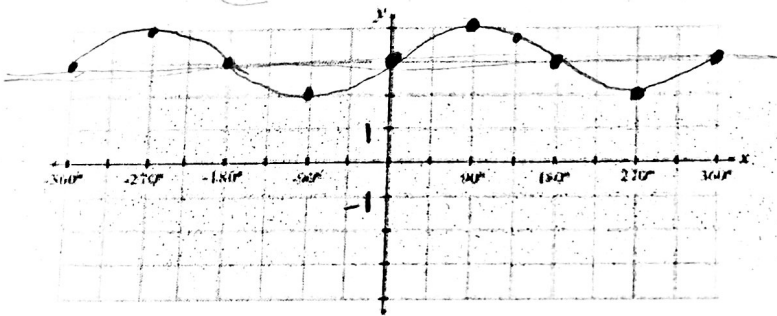Name __KEY__

Date _____ Period ____
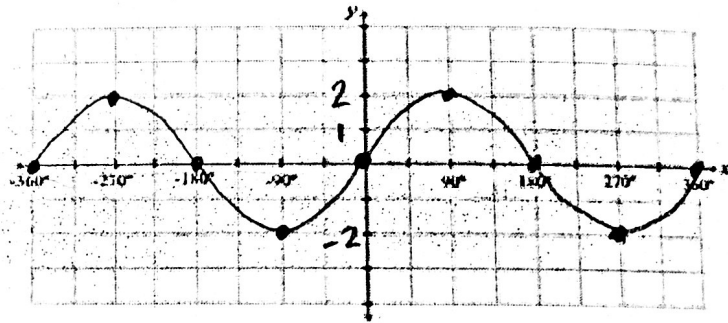
The following is a graph of $y = \sin x$.

Use your knowledge of **_basic transformations_** (shifting up, down, left, and right) to graph the following (LABEL THE AXES appropriately) and answer the questions:

1) $y = \sin x + 3$

3) $y = 2\sin x$

2) What would the approximate height of a rider be if their seat was located at 135°? $\boxed{\sim 3.8}$
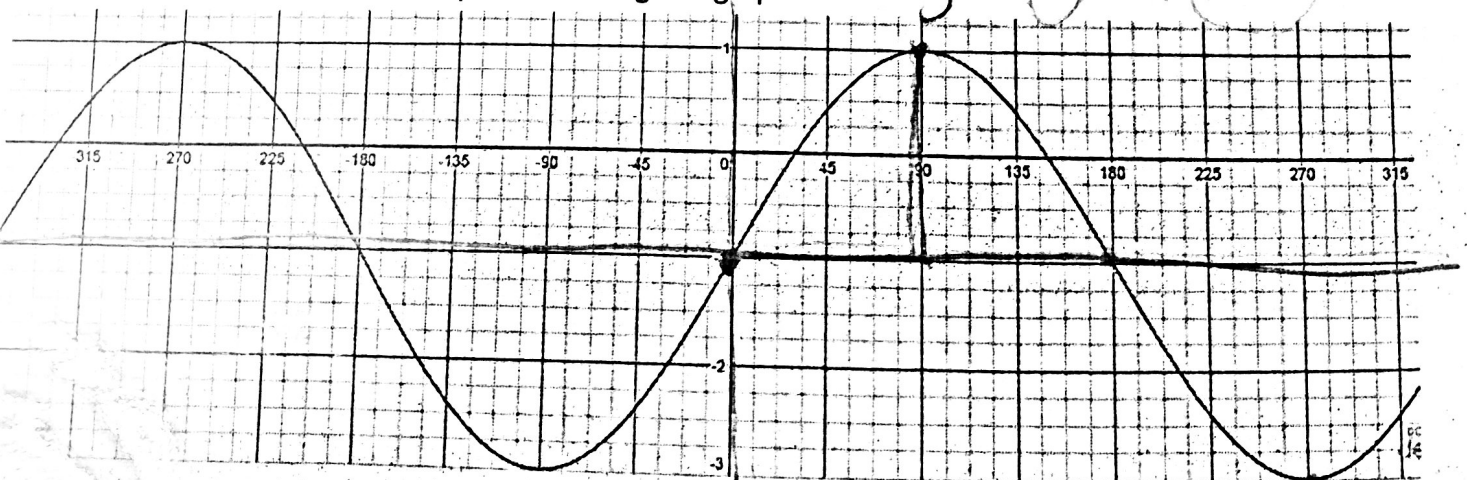
4) What would the approximate height of a rider be if their seat was located at -270°? $\boxed{2}$

5) $y = 3\sin x - 1$

6) Write the equation that corresponds to the given graph: $y = 2\sin x - 1$
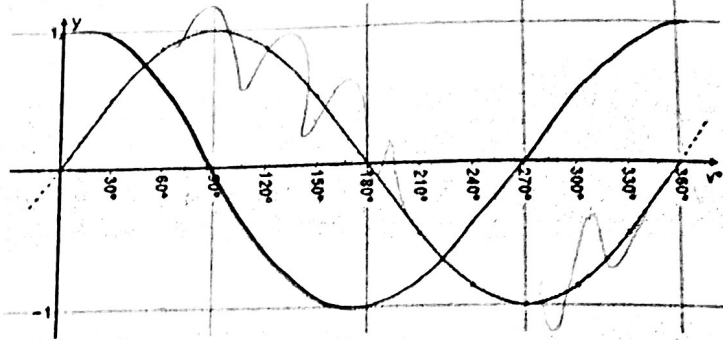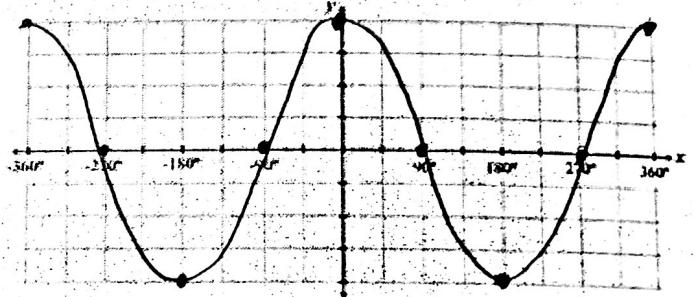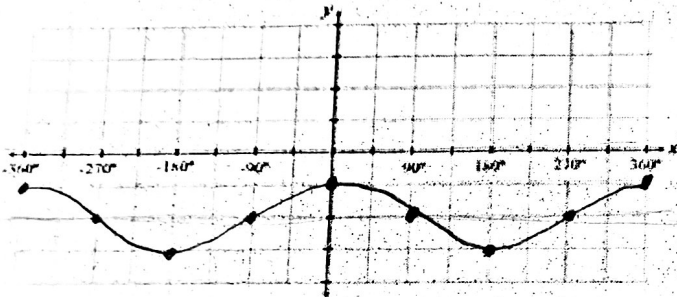
Name __KEY__

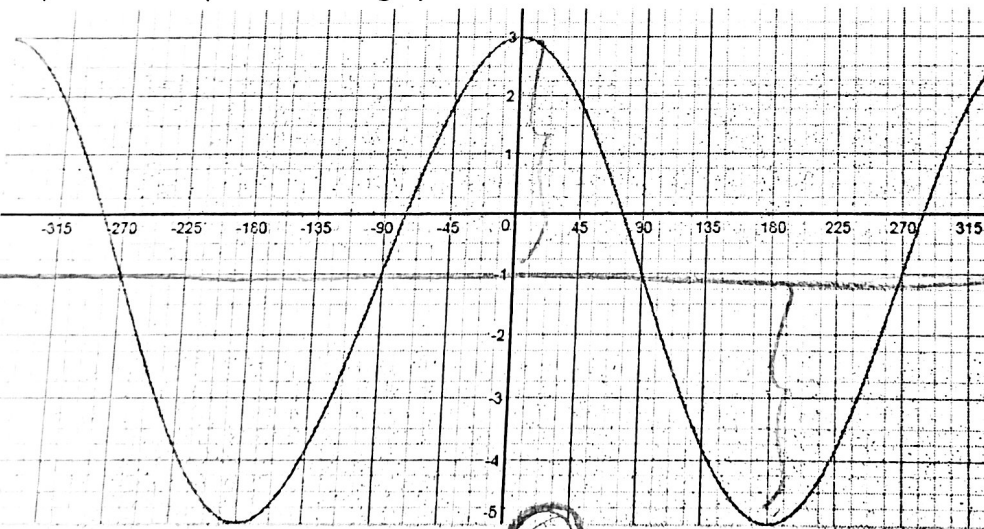Date _____ Period _____

The following is a graph of y = cos x.

Use your knowledge of **_basic transformations_** (shifting up, down, left, and right) to graph the following (LABEL THE AXES appropriately) and answer the questions:

1) $y = \cos x - 2$

2) $y = 4\cos x$

3) Write the equation of the graph shown.

$$y = 4\cos x - 1$$

Consider a wheel (or circle) with a radius of 4 units. Find the coordinates of a point that is on the terminal side of the angle given. Use the methods described in the notes and show your work.

4) 215°

$(-3.28, -2.30)$

$(4\cos 215°, 4\sin 215°)$

5) 28°

$(3.53, 1.88)$

$(4\cos 28°, 4\sin 28°)$

6) 320°

$(3.06, -2.57)$

7) 100°

$(-.69, 3.94)$

When the terminal side of the angle is 40°, the coordinates are at about (0.77, 0.64). What will the coordinates after the wheel rotates another 140°?

$(-1, 0)$

coordinates at 140°? $(-.77, .64)$