Math 51 (7:30am – 8:20am)
Quiz 4
Fri May 8, 2009

WHITE

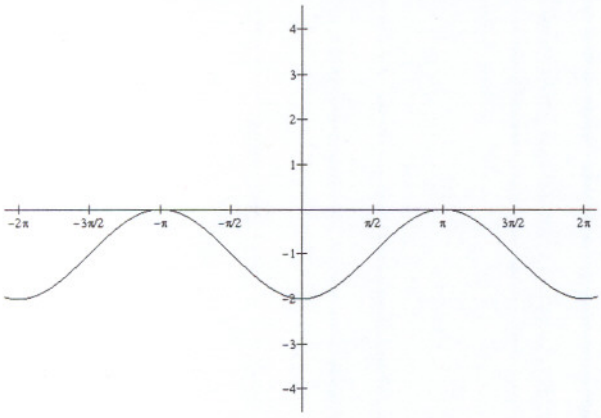
SCORE: ___ / 20 POINTS

What month is your birthday ? ___ ___
What are the first 2 digits of your address ? ___ ___
What are the last 2 digits of your zip code ? ___ ___
What are the last 2 digits of your social security number ? ___ ___
[IF YOU DO NOT HAVE A SOCIAL SECURITY NUMBER, USE YOUR STUDENT ID NUMBER]

NO CALCULATORS ALLOWED

MULTIPLE CHOICE: What is the equation of the graph below ?

SCORE: ___ / 2 POINTS



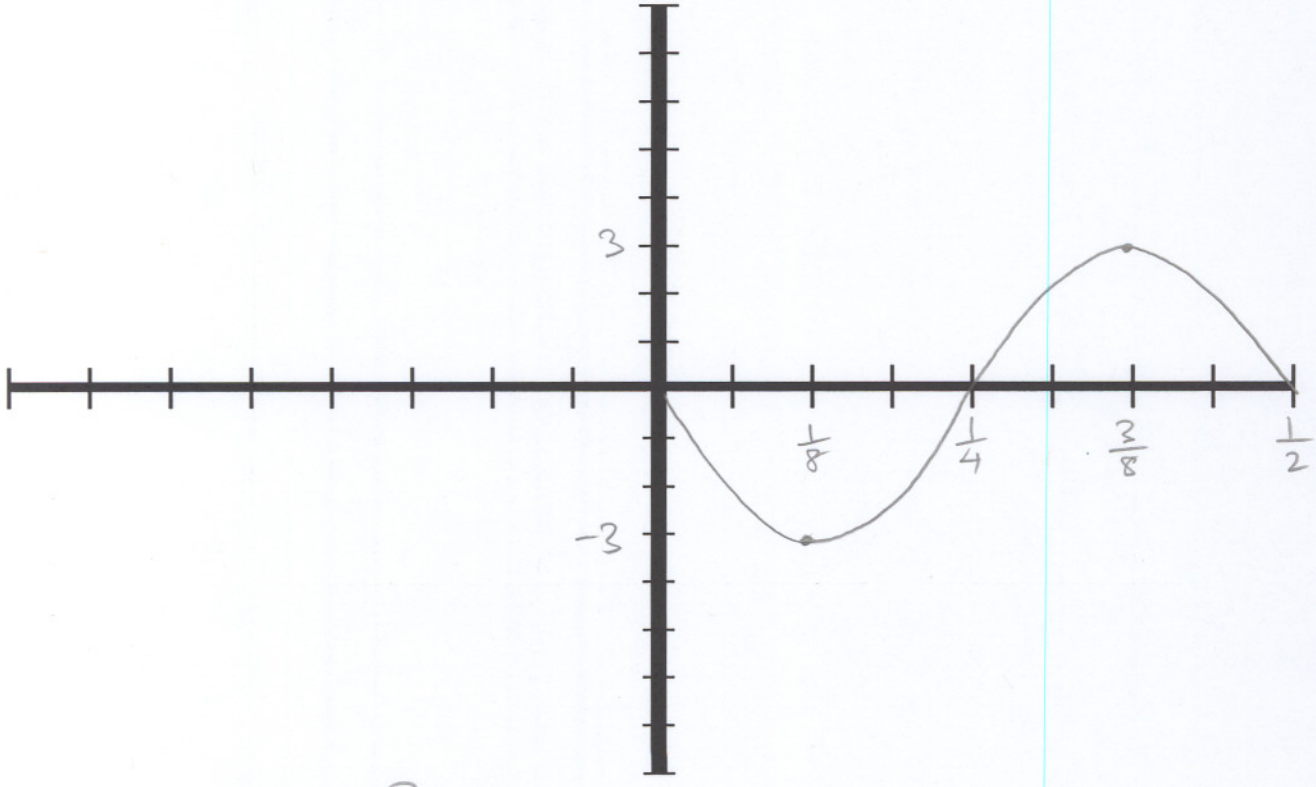
[A] $y = 1 - \cos x$ [B] $y = -1 - \cos x$ [C] $y = -1 + \sin x$ [D] $y = 1 + \sin x$

LETTER OF CORRECT ANSWER: B

Graph **one period** of the function $y = -3\sin 4\pi x$.

SCORE: ___ / 6 POINTS

Label the relevant values on the x– and y–axes as shown in class.



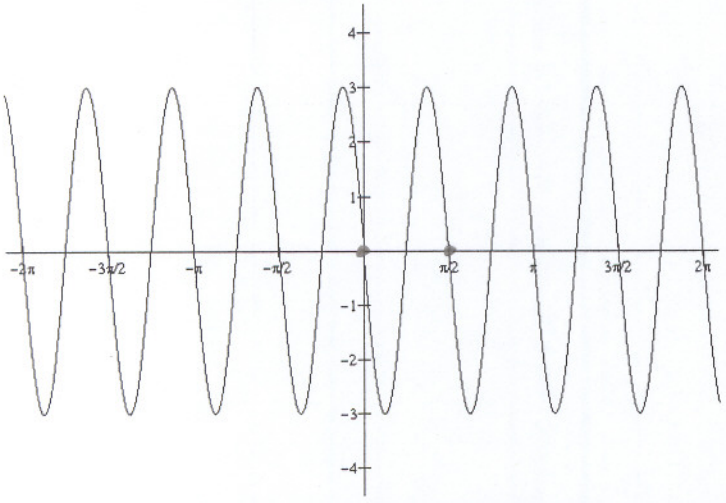
AMPLITUDE = 3

PERIOD = $\frac{2\pi}{4\pi} = \frac{1}{2}$

$\frac{1}{4}$ PERIOD = $\frac{1}{8}$

Find an equation of the graph below. (The equation has the form either $y = a\sin bx$ or $y = a\cos bx$.) **SCORE: ___ / 4 POINTS**

Show how you got your answer.



AMPLITUDE = $3 = |a|$

$a = \pm 3$

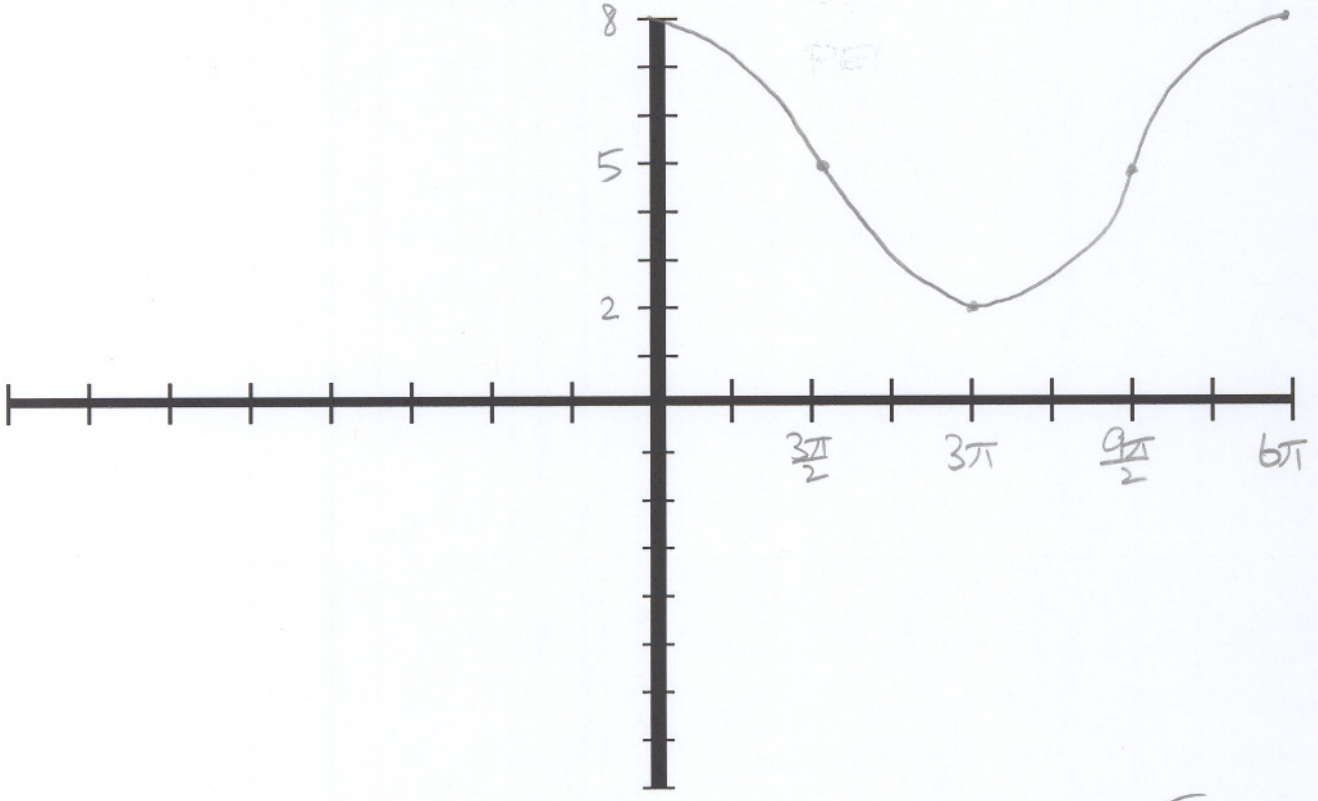
UPSIDE DOWN sin $\Rightarrow a = -3$

PERIOD = $\frac{\pi}{2} = \frac{2\pi}{b} \Rightarrow b = 4$

$y = -3\sin 4x$

Graph **one period** of the function $y = 5 + 3\cos\frac{1}{3}x$. **SCORE: ___ / 8 POINTS**

Label the relevant values on the x– and y–axes as shown in class.



AMPLITUDE = 3

PERIOD = $\frac{2\pi}{1/3} = 6\pi$

$\frac{1}{4}$ PERIOD = $\frac{3\pi}{2}$

MIDLINE $y = 5$

MAX $y = 5 + 3 = 8$

MIN $y = 5 - 3 = 2$