

Name: _____

This quiz covers: 2.6 and 2.7.

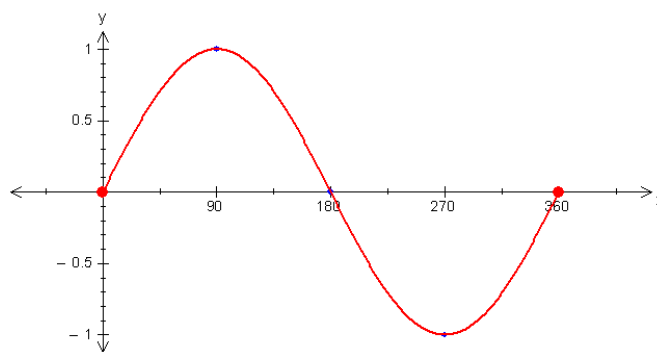
Directions: Complete all question and **show all applicable work.** Partial credit will be given. All questions are equally weighted.

1.) Given $f(x) = 3x^2 - 3$, compute $f'(2)$ using the definition of the derivative. (You must show appropriate work)

2.) Given $f(x) = mx + b$ (a general line), show that $f'(x) = m$ as expected. Hint: Take the derivative of $f(x)$ as normal, treating m and b as constants, and show the derivative equals m .

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3.)



Using the graph above of $f(x)$, create a new axis and sketch $f'(x)$.