I am using my brain today.

A. Yes
B. No

A population follows a logistic growth pattern during a 24 month period, and essentially reaches its carrying capacity of 650 by the end of the 24 months. The population is growing fastest _____.

A. During the first month.
B. During the 24th month.
X C. When the population is about 325.
D. During the 12th month.
X E. It is impossible to tell without more information.

The amplitude and period of the graph of the periodic function in the figure are:

A. Amplitude = 2, Period = 2
B. Amplitude = 2, Period = 3.
✓ C. Amplitude = 2, Period = 1/2
D. Amplitude = 3, Period = 2
X E. Amplitude = 3, Period = 1/2

The rabbit population, P, in a wilderness area is approximated by the function below, where t is the number of weeks since the first rabbits were introduced into the area. How many rabbits were initially introduced into the area?

✓ 20.0
X 0.01

The rabbit population, P, in a wilderness area is approximated by the function below, where t is the number of weeks since the first rabbits were introduced into the area. How many rabbits were in the area after 6 weeks?

✓ 87.0
X 0.5

What is the amplitude and period of

\[ P(t) = 2 - 3 \sin(2t) \]

A. Amplitude = 2, period = 2
X B. Amplitude = -3, period = \( \pi \)
C. Amplitude = 3, period = 4\( \pi \)
D. Amplitude = 3, period = \( \pi \)
X E. Amplitude = 2, period = \( \pi \)
F. Amplitude = 2\( \pi \), period = 3
X G. Amplitude = 3, period = \( \pi \)
Mr. Eby is out to get you, and will make the test nothing like the homework and in class problems.

A. True  
B. False

The rabbit population, \( P \); in a wilderness area is approximated by the function below, where \( t \) is the number of weeks since the first rabbits were introduced into the area. What is the maximum number of rabbits this area can sustain?

\[
P(t) = \frac{500}{1 + 24e^{-0.27t}}
\]

A. 500.0  
B. 0.00

Is the following relation a function?

A. Yes  
B. No

How many multiple choice questions will be on this first test?

A. 100 Billion Mr. Powers!  
B. 42  
C. It depends upon how much you pay Mr. Eby  
D. \( \pi \)  
E. e  
F. Zero