

## Practice for Quiz 3

Math 130 *Kovitz* Spring 2019

The quiz is on Thursday, April 25.

1. The number of bacteria in a culture is increasing according to the law of exponential growth.

After 9 hours there are 640 bacteria, and after 11 hours there are 1000 bacteria.

- (a) How many bacteria will there be after 13 hours?
- (b) About how long does it take for this population to double (in fractions of an hour)?
- (c) After how many hours are there 1250 bacteria?
- (d) After how many hours are there 1280 bacteria (in fractions of an hour)?

2. The number of bacteria in a culture is increasing according to the law of exponential growth.

After 3 hours there are 800 bacteria, and after 5 hours there are 1200 bacteria.

- (a) How many bacteria will there be after 7 hours?
- (b) About how long does it take for this population to double (in fractions of an hour)?
- (c) After how many hours are there 1600 bacteria (in fractions of an hour)?

**Answers follow.**

## **Answers.**

1. (a) 1562.5 bacteria.  
(b) 3.106 hours.  
(c) 12 hours.  
(d) 12.106 hours.
2. (a) 1800 bacteria.  
(b) 3.419 hours.  
(c) 6.419 hours.