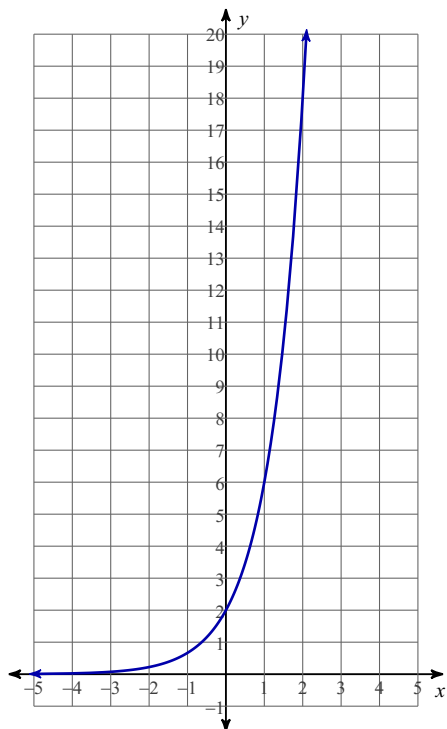


Exponential Functions Quiz

Date _____ Period _____

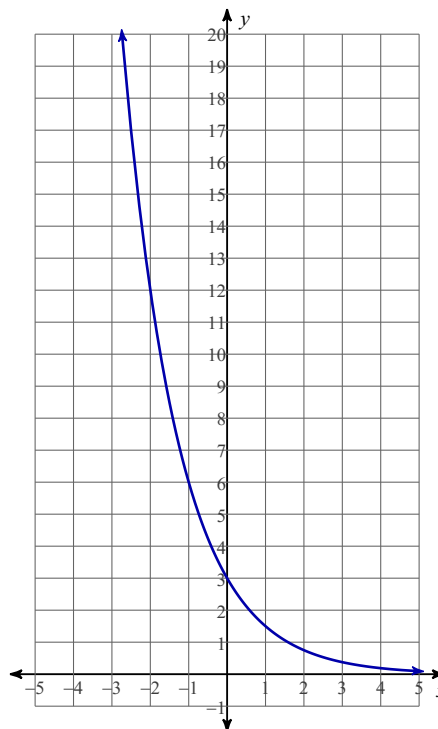
Multiple Choice: Write an equation for each graph.

1)



- A) $y = 3 \cdot 2^x$ B) $y = 3^x$
 C) $y = 2 \cdot 2^x$ D) $y = 2 \cdot 3^x$

2)



- A) $3 \cdot 2^x$ B) $2 \cdot \left(\frac{1}{3}\right)^x$
 C) $y = 3 \cdot \left(\frac{1}{2}\right)^x$ D) $2 \cdot 3^x$

Select the best answer.

3) Suppose a population of 12 rabbits doubled every month. Write an equation to represent the number of rabbits after t months.

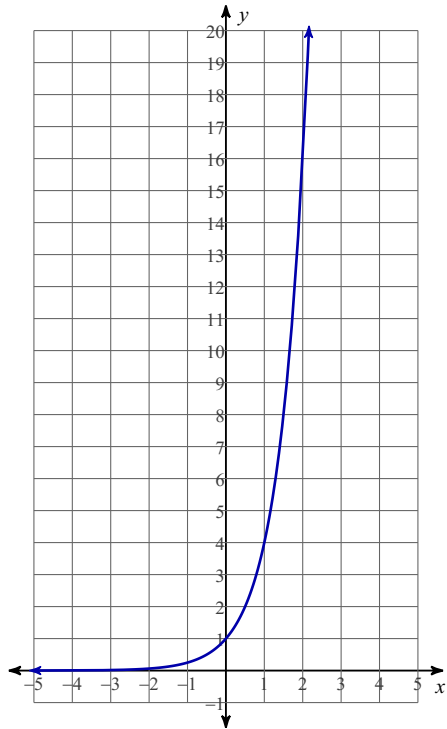
- A) $y = 2 \cdot 12^t$ B) $y = 12 \cdot 2^t$
 C) $y = 24t$ D) $y = 24^t$

4) Mrs. Gulamali bought a car for \$9000. The value of the car declines at 5% per year. This can be represented by the function $A(t) = 9000 \cdot 0.95^t$, where t is measured in years. How much will the car be worth in 4 years?

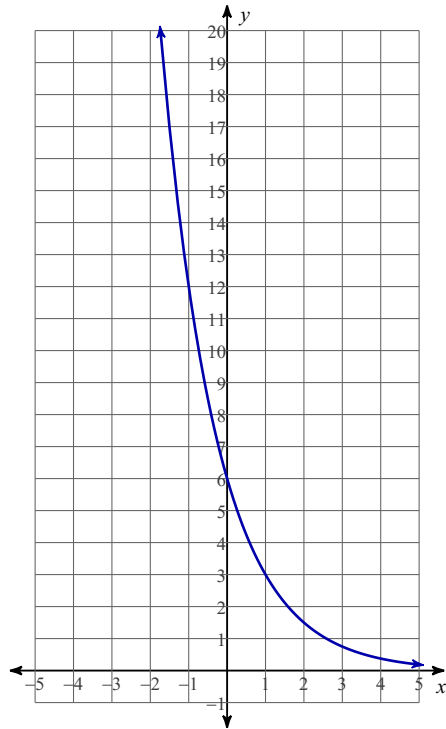
- A) \$6964.03 B) \$7330.56
 C) \$5343.98 D) \$7716.38

Write an equation for each graph.

5)

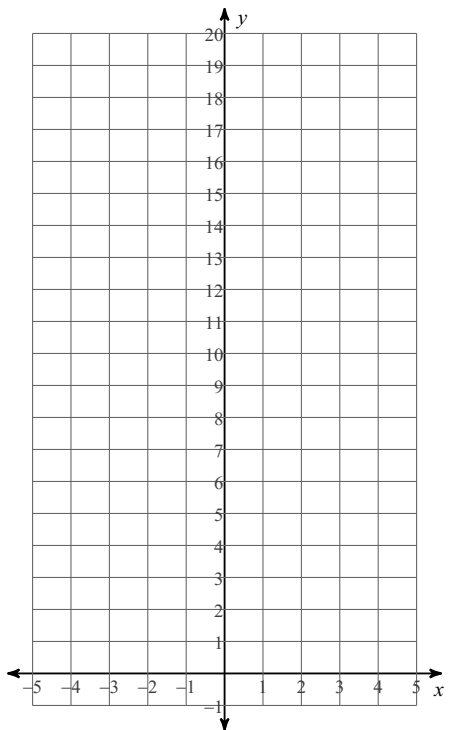


6)

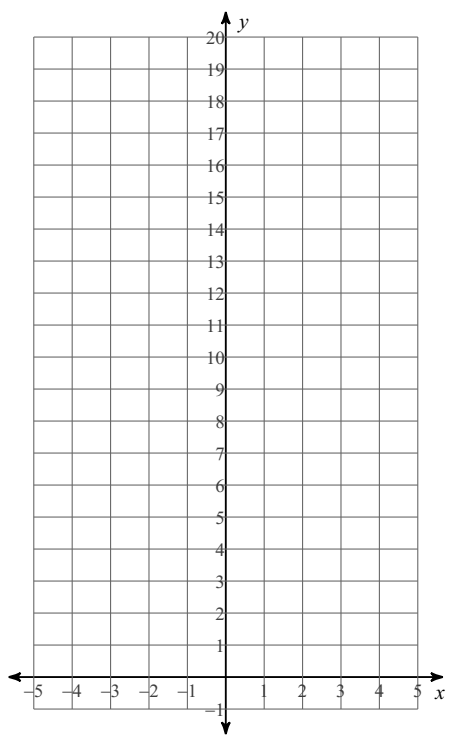


Graph each equation.

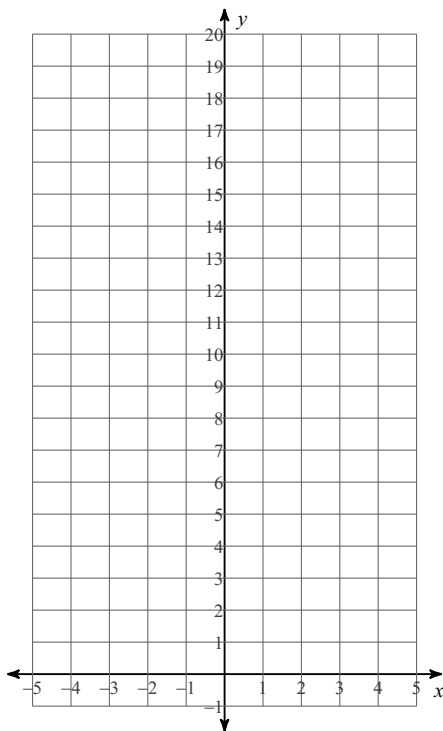
7) $y = 3^x$



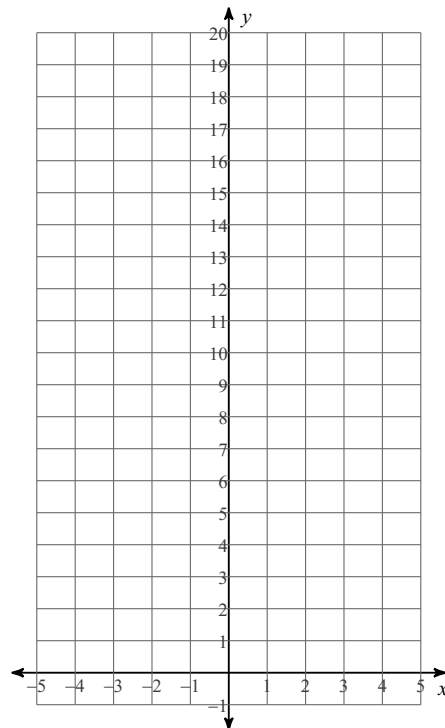
8) $y = \left(\frac{1}{2}\right)^x$



9) $y = 4 \cdot 2^x$



10) $y = 3 \cdot \left(\frac{1}{3}\right)^x$



When you take a certain medication, it decays in such a way that after each hour, half of the remaining medication is used up. You are instructed to take 100 mg. of the medication at a time.

- 11) Write an equation that will calculate the remaining medicine in your system each hour.
- 12) How much medicine would remain in the body after 3 hours?
- 13) Extra Credit: How much medicine would remain in the body after 30 minutes?