

Rewrite in standard form.

1) 2.03×10^3

2) 8.497×10^{-4}

1 pt each

Rewrite in scientific notation.

3) 0.0083

4) 36.41

1 pt each

Evaluate the expression without a calculator. Write the result in scientific notation.

5) $(2 \times 10^3)(6 \times 10^8)$

6) $\frac{5 \times 10^{-2}}{10 \times 10^{-2}}$

7) $(5 \times 10^{-2})^3$

2 pts each

8) Given the model $y = 1,000(1.34)^t \dots$

3 pts

a. Identify the situation as either exponential growth or decay

Circle one: Exponential Growth Exponential Decay

b. Identify the **initial amount** and the **rate**

Initial amount:	Rate: <i>(write as a percent)</i>
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- 9) Suppose that you memorize a list of 100 German vocabulary words. Each week you forget $\frac{1}{8}$ of the words you knew the previous week. The number of vocabulary words, W , you remember after t weeks can be modeled by:

$$W = \underline{\hspace{2cm}} (\underline{\hspace{2cm}})^t \quad (\text{fill in the blank to complete the function})$$

Complete the table showing the number of words you remember each week.

3 pts

Week, t	0	5	10	15
Words, W				

- 10) The number of students who have applied for internet privileges at school has doubled each month. Ten students had applied for the Internet privileges initially. 3 pts

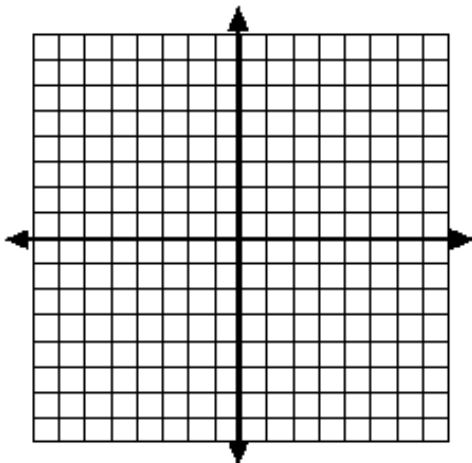
- Write a function that models the number of students applying for Internet privileges over time. Define your variables!
- How many students will have applied for Internet privileges in 4 months?

11) Graph $y = \left(\frac{1}{4}\right)^x$ 3 pts

$x=0 \rightarrow$ _____, point = _____

$x=1 \rightarrow$ _____, point = _____

Domain: _____ Range: _____



12) Graph $y = -\frac{1}{2} \cdot 5^x$ 3 pts

$x=0 \rightarrow$ _____, point = _____

$x=1 \rightarrow$ _____, point = _____

Domain: _____ Range: _____

