

Directions: Rewrite in standard form.

1) 2.03×10^3	2) 8.497×10^{-4}
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Directions: Rewrite in scientific notation.

3) 0.0083	4) 36.41
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Directions: Evaluate the expression without a calculator. Write the result in scientific notation.

5) $(2 \times 10^3)(3 \times 10^8)$	6) $\frac{5 \times 10^{-2}}{10 \times 10^{-2}}$	7) $(5 \times 10^{-2})^3$
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8) Given the model $y = 231(1.34)^t$

a) Identify the situation as either exponential growth or decay

Circle one: Exponential Growth Exponential Decay

b) Define the **initial amount** and the **rate**

Initial amount:	Rate: (write as a percent)
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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, V , you remember after t weeks can be modeled by:

$$V = 100 \left(\frac{7}{8} \right)^t$$

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

Week, t	0	5	10	15
Words, V				

10) A business had a \$5,000 profit in 1990. Then the profit increased by 15% per year for the next 10 years.

a) Identify the situation as either exponential growth or decay

Circle one: Exponential Growth Exponential Decay

b) Write a growth or decay model for the situation.

c) Estimate the profit of the company in 2000

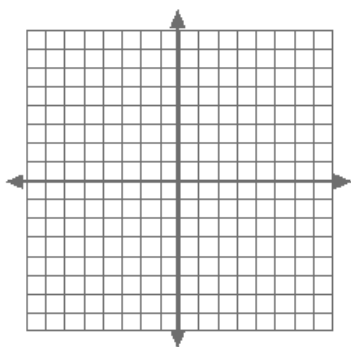
11) Graph $y = \left(\frac{1}{4} \right)^x$

$x \rightarrow 0$ _____, point = _____

$x \rightarrow 1$ _____, point = _____

Domain: _____

Range: _____



12) Graph $y = 4 \cdot 2^x$

$x \rightarrow 0$ _____, point = _____

$x \rightarrow 1$ _____, point = _____

Domain: _____

Range: _____

