

Lesson 4 Practice Problems

1. Evaluate:

a. 10^0

b. $\frac{10^3}{10^3}$

c. $10^2 + 10^1 + 10^0$

2. Write each expression as a single power of 10.

a. $\frac{10^3 \cdot 10^4}{10^5}$

b. $(10^4) \cdot \frac{10^{12}}{10^7}$

c. $\left(\frac{10^5}{10^3}\right)^4$

d. $\frac{10^4 \cdot 10^5 \cdot 10^6}{10^3 \cdot 10^7}$

e. $\frac{(10^5)^2}{(10^2)^3}$

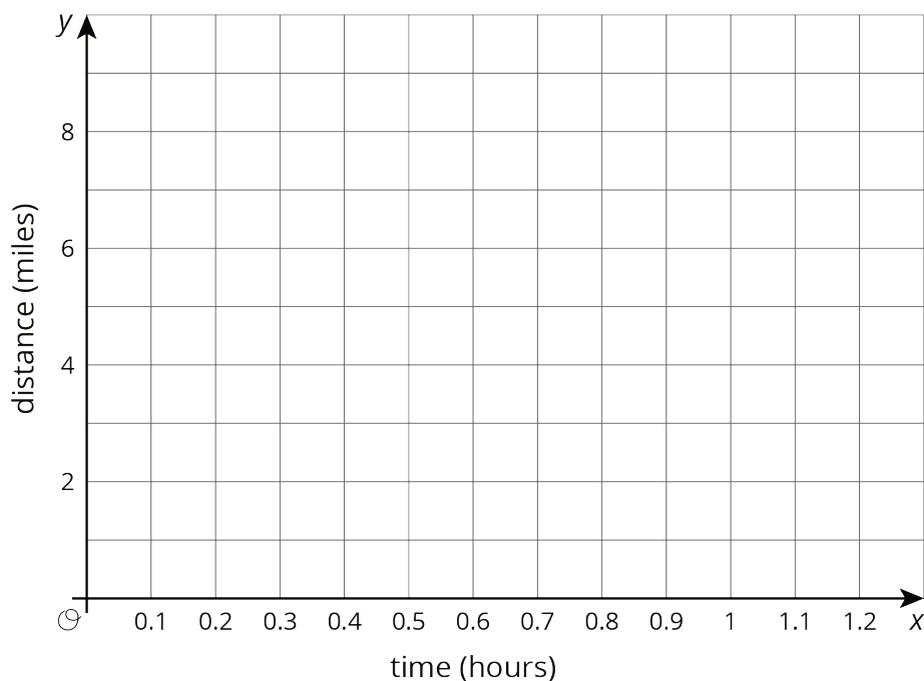
3. The Sun is roughly 10^2 times as wide as Earth. The star KW Sagittarii is roughly 10^5 times as wide as Earth. About how many times as wide as the Sun is KW Sagittarii? Explain how you know.

4. Bananas cost \$1.50 per pound, and guavas cost \$3.00 per pound. Kiran spends \$12 on fruit for a breakfast his family is hosting. Let b be the number of pounds of bananas Kiran buys and g be the number of pounds of guavas he buys.

- a. Write an equation relating the two variables.
- b. Rearrange the equation so b is the independent variable.
- c. Rearrange the equation so g is the independent variable.

(From Unit 5, Lesson 3.)

5. Lin’s mom bikes at a constant speed of 12 miles per hour. Lin walks at a constant speed $\frac{1}{3}$ of the speed her mom bikes. Sketch a graph of both of these relationships.



(From Unit 3, Lesson 1.)