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Unit 7, Lesson 13

Practice Problems

1. Write each number in scientific notation.

- a. 14,700
- b. 0.00083
- c. 760,000,000
- d. 0.038
- e. 0.38
- f. 3.8
- g. 3,800,000,000,000
- h. 0.0000000009

2. Perform the following calculations. Express your answers in scientific notation.

- a. $(2 \times 10^5) + (6 \times 10^5)$
- b. $(4.1 \times 10^7) \cdot 2$
- c. $(1.5 \times 10^{11}) \cdot 3$
- d. $(3 \times 10^3)^2$
- e. $(9 \times 10^6) \cdot (3 \times 10^6)$

3. Jada is making a scale model of the solar system. The distance from Earth to the moon is about 2.389×10^5 miles. The distance from Earth to the sun is about 9.296×10^7 miles. She decides to put Earth on one corner of her dresser and the moon on another corner, about a foot away. Where should she put the sun?

- On a windowsill in the same room?
- In her kitchen, which is down the hallway?
- A city block away?

Explain your reasoning.

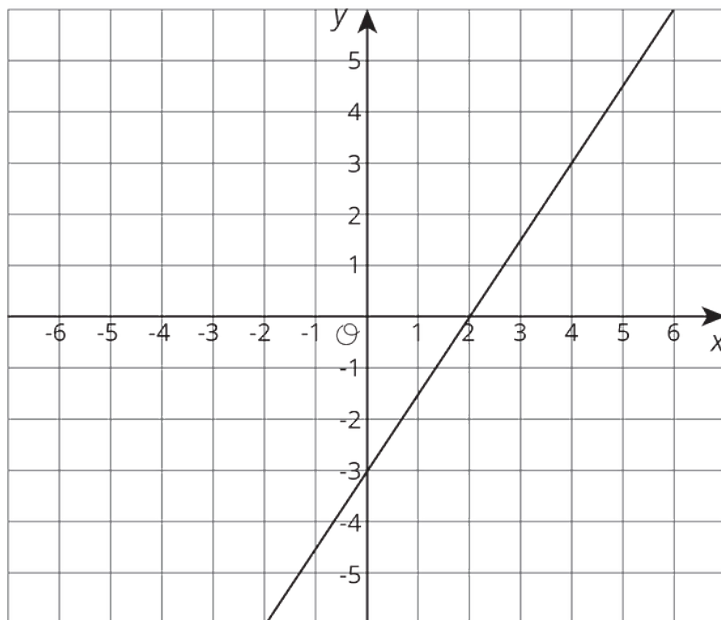


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4. Here is the graph for one equation in a system of equations.



- Write a second equation for the system so it has infinitely many solutions.
- Write a second equation whose graph goes through $(0, 2)$ so that the system has no solutions.
- Write a second equation whose graph goes through $(2, 2)$ so that the system has one solution at $(4, 3)$.