Lesson 9 Practice Problems

1. Match each number to its name.

a. 1,000,000	○ One hundredth
b. 0.01	○ One thousandth
c. 1,000,000,000	○ One millionth
d. 0.000001	○ Ten thousand
e. 0.001	○ One million
f. 10,000	○ One billion

2. Write each expression as a multiple of a power of 10:

   a. 42,300

   b. 2,000

   c. 9,200,000

   d. Four thousand

   e. 80 million

   f. 32 billion

3. Each statement contains a quantity. Rewrite each quantity using a power of 10.

   a. There are about 37 trillion cells in an average human body.

   b. The Milky Way contains about 300 billion stars.

   c. A sharp knife is 23 millionths of a meter thick at its tip.

   d. The wall of a certain cell in the human body is 4 nanometers thick. (A nanometer is one billionth of a meter.)

4. A fully inflated basketball has a radius of 12 cm. Your basketball is only inflated halfway. How many more cubic centimeters of air does your ball need to fully inflate? Express your answer in terms of π. Then estimate how many cubic centimeters this is by using 3.14 to approximate π.

(From Unit 6, Lesson 24.)

5. Solve each of these equations. Explain or show your reasoning.

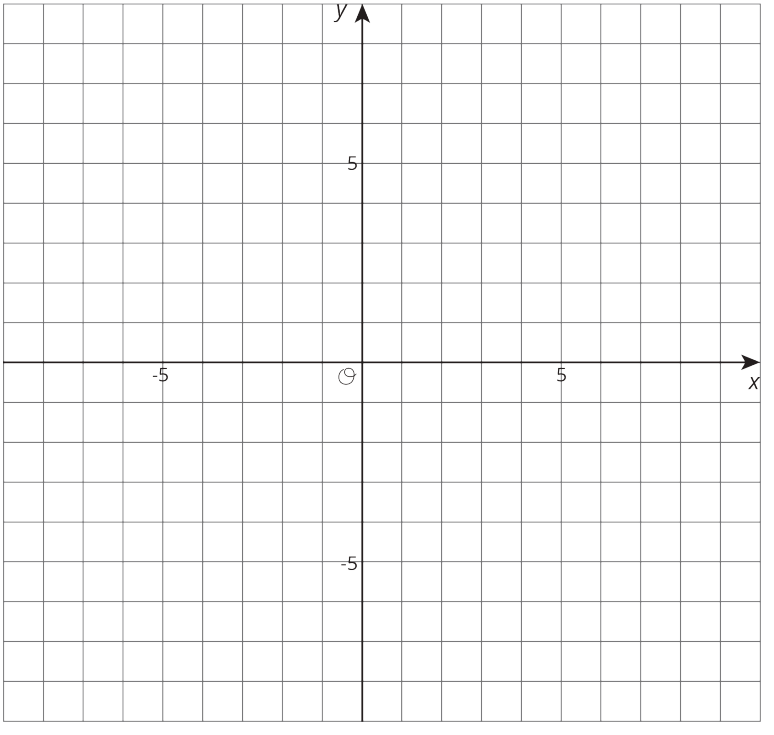
$2(3-2c)=30$

$3x-2=7-6x$

$31=5(b-2)$

(From Unit 4, Lesson 13.)

6. Graph the line going through $(-6, 1)$ with a slope of $\frac{-2}{3}$ and write its equation.



(From Unit 5, Lesson 9.)

7. On a map of Chicago, 1 cm represents 100 m. Select **all** statements that express the same scale.

   A. 5 cm on the map represents 50 m in Chicago.

   B. 1 mm on the map represents 10 m in Chicago.

   C. 1 km in Chicago is represented by 10 cm the map.

   D. 100 cm in Chicago is represented by 1 m on the map.

(From Unit 2, Lesson 5.)