

## Vocabulary and Concept Check

- 1. WRITING** Describe the difference between scientific notation and standard form.
- 2. WHICH ONE DOESN'T BELONG?** Which number does *not* belong with the other three? Explain.

$$2.8 \times 10^{15}$$

$$4.3 \times 10^{-30}$$

$$1.05 \times 10^{28}$$

$$10 \times 9.2^{-13}$$

## Practice and Problem Solving

Write your answer in standard form.

- 3.** A micrometer is  $1.0 \times 10^{-6}$  meter. How long is 150 micrometers in meters?
- 4.** An acre is about  $4.05 \times 10^7$  square centimeters. How many square centimeters are in 4 acres?
- 5.** A cubic millimeter is about  $6.1 \times 10^{-5}$  cubic inches. How many cubic millimeters are in 1.22 cubic inches?

Tell whether the number is written in scientific notation. Explain.

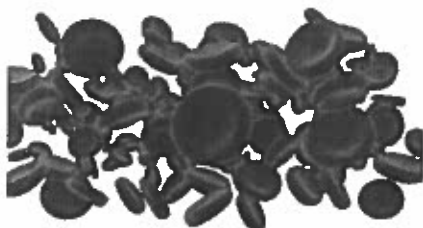
- |                                    |                                   |                                   |
|------------------------------------|-----------------------------------|-----------------------------------|
| <b>6.</b> $1.8 \times 10^9$        | <b>7.</b> $3.45 \times 10^{14}$   | <b>8.</b> $0.26 \times 10^{-25}$  |
| <b>9.</b> $10.5 \times 10^{12}$    | <b>10.</b> $46 \times 10^{-17}$   | <b>11.</b> $5 \times 10^{-19}$    |
| <b>12.</b> $7.814 \times 10^{-36}$ | <b>13.</b> $0.999 \times 10^{42}$ | <b>14.</b> $6.022 \times 10^{23}$ |

Write the number in standard form.

- |                                 |                                  |                                |
|---------------------------------|----------------------------------|--------------------------------|
| <b>15.</b> $7 \times 10^7$      | <b>16.</b> $8 \times 10^{-3}$    | <b>17.</b> $5 \times 10^2$     |
| <b>18.</b> $2.7 \times 10^{-4}$ | <b>19.</b> $4.4 \times 10^{-5}$  | <b>20.</b> $2.1 \times 10^3$   |
| <b>21.</b> $1.66 \times 10^9$   | <b>22.</b> $3.85 \times 10^{-8}$ | <b>23.</b> $9.725 \times 10^6$ |

- 24. ERROR ANALYSIS** Describe and correct the error in writing the number in standard form.

**X**  $4.1 \times 10^{-6} = 4100000$



$2.7 \times 10^8$  platelets per milliliter

- 25. PLATELETS** Platelets are cell-like particles in the blood that help form blood clots.
- How many platelets are in 3 milliliters of blood? Write your answer in standard form.
  - An adult body contains about 5 liters of blood. How many platelets are in an adult body?