

Day 2

Number Sense – Scientific Notation

Scientific Notation Examples

Decimal Notation:	Scientific Notation:
12,400,000	1.24×10^7
4,101.75	4.10175×10^3
0.000038	3.8×10^{-5}

Note: Use the EE button on the calculator

Examples

Decimal Notation:	Scientific Notation:
62,000	_____
_____	4.15×10^6
0.008	_____
_____	3.2×10^{-3}

Your Turn

Decimal Notation:	Scientific Notation:
210,000	_____
_____	4.1×10^4
0.00011	_____
_____	3.2×10^{-5}

OGT Preparation #2
NS03 - Scientific Notation

Name _____

1. The diameter of a pollen grain from a flower can range from 0.0000004 inches to 0.00002 inches. Which of the following would be an equivalent description of the range of the diameters of pollen grains?

- A. from $4/100,000$ inches to $2/1,000$ inches
- B. from $4/10,000,000$ inches to $2/10,000$ inches
- C. from 4×10^{-6} inches to 2×10^{-4} inches
- D. from 4×10^{-7} inches to 2×10^{-5} inches

2. Which expression represents 270,000 written in scientific notation?

- A. 270×10^3
- B. 27×10^4
- C. 2.7×10^5
- D. 0.27×10^6

3. The diameter of the sun is 864,000 miles. How can this value be expressed in scientific notation?

- A. 8.64×10^5
- B. 0.864×10^5
- C. 86.4×10^3
- D. 8.64×10^{-5}

4. The power output of a nuclear reactor is 2.4×10^7 watts. Which number expresses the same value in standard notation?

- A. 2,400,000 watts
- B. 9,400,000 watts
- C. 16,800,000 watts
- D. 24,000,000 watts

5. The area of Alaska is about 6×10^5 square miles. The area of Rhode Island is about 1.5×10^3 square miles. What is the difference between the area of Alaska and the area of Rhode Island?

- A. 4.5×10^2 square miles
- B. 4.5×10^5 square miles
- C. 5.985×10^5 square miles
- D. 5985×10^5 square miles

6. Jupiter's diameter is 88,640 miles. How is this measurement expressed in scientific notation?

- A. 8.864×10^3 miles
- B. 0.864×10^4 miles
- C. 8.864×10^4 miles
- D. 88.64×10^4 miles

7.

Earth has a surface area of 1.97×10^8 square miles. A new planet has a surface area 13 times the surface area of Earth.

What is the surface area of the new planet?

- A. 1.515×10^7 square miles
- B. 2.10×10^8 square miles
- C. 2.56×10^8 square miles
- D. 2.56×10^9 square miles

1. The diameter of a pollen grain from a flower can range from 0.0000004 inches to 0.00002 inches. Which of the following would be an equivalent description of the range of the diameters of pollen grains?
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600000
 $- 1500$
 598500

subtraction $6 \times 10^5 - 1.5 \times 10^3 = 598,500$

6. Jupiter's diameter is 88,640 miles. How is this measurement expressed in scientific notation?
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 - B. 0.864×10^4 miles
 - C. 8.864×10^4 miles
 - D. 88.64×10^4 miles

7. Earth has a surface area of 1.97×10^8 square miles. A new planet has a surface area 13 times the surface area of Earth.

\rightarrow multiply $1.97 \times 10^8 \cdot 13 =$

2.561×10^9

- What is the surface area of the new planet?
- A. 1.515×10^7 square miles
 - B. 2.10×10^8 square miles
 - C. 2.56×10^8 square miles
 - D. 2.56×10^9 square miles