

Algebra 1 SOL Released Questions:

Scientific Notation

Which equals $(2.3 \times 10^3)(3.6 \times 10^3)$?

F 8.28×10^9

G 8.28×10^6

H 5.90×10^9

J 5.90×10^6

A computer chip has two pins on one side. One pin is 4.0×10^{-3} inches long and the other is 2.5×10^{-3} inches long. What is the difference in the lengths of the pins?

- F** 6.5×10^9 in.
- G** 6.5×10^{-3} in.
- H** 1.5×10^{-3} in.
- J** 1.5×10^{-6} in.

Which is equivalent to the following expression?

$$(2.3 \times 10^4) - (6.5 \times 10^3)$$

- F** -42
- G** 165
- H** 1,650
- J** 16,500

3.81×10^{-4} may be written as —

F 0.0000381

G 0.000381

H 3,810

J 38,100

The speed of sound in water is 1.46×10^3 meters per second. The speed of sound in air is 3.31×10^2 meters per second. How much faster does sound travel in water than in air?

- F** 1.85×10^{-3} m/s
- G** 1.129×10^2 m/s
- H** 1.85×10^2 m/s
- J** 1.129×10^3 m/s

The continent of North America has an area of approximately 9.4×10^6 square miles. The area of Asia is approximately 1.74×10^7 square miles. How many square miles larger is Asia than North America?

F 7.6×10^1

G 7.6×10^{-1}

H 8.0×10^6

J 8.0×10^1

The diameter of a barium atom is 0.0000004346 millimeters. In scientific notation it is —

- A 43.46×10^{-8} mm
- B 4.346×10^7 mm
- C 4.346×10^{-7} mm
- D 4346.0×10^{-7} mm

The population of Asia is about 3.4×10^9 . The population of Africa is about 7×10^8 . About how many more people live in Asia than live in Africa?

- F 27,000,000**
- G 270,000,000**
- H 360,000,000**
- J 2,700,000,000**

The sun is about 1.5×10^8 kilometers from Earth. If light travels about 3×10^5 kilometers per second, about how many seconds does it take light from the sun to reach Earth?

- A 5**
- B 50**
- C 500**
- D 5,000**