

Name: Answers

Date: _____

Class: _____

Scientific Notation: Large and Small Numbers

Switch these numbers into standard form.

1) 9.10×10^{-3}

009.10.0091

9.10×10^3

9,1009100

2) 3.18×10^{-6}

000003.18.00000318

3.18×10^6

3,180,0003180000

3) 4.82×10^{-5}

00004.82.0000482

4.82×10^5

4,820,0004820000

4) 3.85×10^{-3}

003.85.00385

3.85×10^3

3,8503850

5) 5.34×10^{-7}

0000005.34.000000534

5.34×10^7

5,340,000,000534000000

6) 3.70×10^{-4}

0003.70.00037

3.70×10^4

3,700037000

Switch these numbers into Scientific Notation accurate to 2 decimal places.

7) 0.000543

 5.43×10^{-4}

8) $54,300$

 5.43×10^4

9) $927,610$

 9.28×10^5

10) 0.00987

 9.87×10^{-3}

11) 0.00005429

 5.43×10^{-5}

12) $5,231$

 5.23×10^3

13) $12,568,021$

 1.26×10^7

14) $56,844$

 5.68×10^4

15) 0.00056

 5.6×10^{-4}

These problems are in scientific notation. Switch them to standard form.

16) 2×10^4

20000

20000

17) 8×10^2

800

800

18) 132×10^6

1,320,000

1320000

19) 3.12×10^4

31200

31200

20) 5.4×10^2

540

540

21) 1.6×10^3

1600

1600

Is the number in scientific notation? If it is not, correctly write it in scientific notation.

22) 52.6×10^2 ← incorrect

5260 = 5260

5.26×10^3

23) 1.2×10^9

correct

24) 5×10^6

correct

25) 6.03×10

correct

26) 5.8×10^7

correct

27) 78.4×10^6 ← incorrect

78400000

78400000 = 7.84×10^7

Word Problems

28) Mr. Griffin's class is studying the solar system. The circumference of the Earth at the equator is about 24,900 miles. Express this number in scientific notation.

24900

2.49×10^4 mi

29) The speed of light is approximately 6.71×10^8 miles per hour. Express this number in standard form.

6,710,000,000

671,000,000 mi/hr

30) The state of Colorado covers about 1.04×10^5 square miles. The Indian Ocean covers about 2.808×10^7 square miles. Which is bigger? How much bigger?

Colorado = $1.04000 = 104,000$ mi²

Indian Ocean = $2.8080000 = 2,8080,000$ mi²

The Indian Ocean is bigger ~~than~~ over (270 times bigger)