

Math 7 Test
SOL 7.1b—Scientific Notation

Name: _____

1. Circle all the values which are less than 4.205×10^{14} .

- 4.26×10^{14} 4.201×10^{14} 4.001×10^{15}
 4.989×10^{13} 4.105×10^{14} 4.204×10^{-14}

2. Place the values in the blanks to make the statement true.

(1.43×10^2 , 1.98×10^{-2} , 1.25×10^4)

_____ > _____ > _____

3. Henry won 35 million dollars in the lottery. Write his winnings on the blank below using scientific notation.



4. Students are collecting aluminum cans for a recycling contest. Using the information in the chart, list the students' names in order of who collected the least amount to the greatest amount.



Student	Number of Cans Collected
John	2.1×10^2
Sally	1.6×10^3
Henry	8.3×10^1

1. _____ 2. _____ 3. _____

5. We like to think Earth is huge, but it is actually one of the smaller planets in our solar system. Using scientific notation, complete the chart below.

Planet	Approximate diameter (miles)	Diameter, using <i>scientific notation</i>	Approximate distance from the sun (miles)	Distance, using <i>scientific notation</i>
Earth	7,930		93,000,000	
Jupiter	88,900		484,000,000	
Mars	4,220		142,000,000	
Mercury	3,030		36,300,000	
Neptune	30,800		2,800,000,000	
Pluto	1,450		3,670,000,000	
Saturn	74,900		888,000,000	
Uranus	31,800		1,780,000,000	
Venus	7,520		67,200,000	

6. List the planets in order from largest to smallest, using scientific notation.

Planet	Diameter, using <i>scientific notation</i>

7. Order the planets by distance from the sun, least to greatest, using scientific notation.

Planet	Distance, using <i>scientific notation</i>

Bonus: In your own words, explain how scientific notation of numbers can be useful.

Math SOL 7.1b—Scientific Notation**Answer Key**

1. 4.201×10^{14} , 4.989×10^{13} , 4.105×10^{14} , 4.204×10^{-14}
2. 1.25×10^4 , 1.43×10^2 , 1.98×10^{-2}
3. 3.5×10^7
4. Henry, John, Sally
- 5.

Planet	Approximate diameter (miles)	Diameter, using <i>scientific notation</i>	Approximate distance from the sun (miles)	Distance, using <i>scientific notation</i>
Earth	7,930	7.93×10^3	93,000,000	9.3×10^7
Jupiter	88,900	8.89×10^4	484,000,000	4.84×10^8
Mars	4,220	4.22×10^3	142,000,000	1.42×10^8
Mercury	3,030	3.03×10^3	36,300,000	3.63×10^7
Neptune	30,800	3.08×10^4	2,800,000,000	2.8×10^9
Pluto	1,450	1.45×10^3	3,670,000,000	3.67×10^9
Saturn	74,900	7.49×10^4	888,000,000	8.88×10^8
Uranus	31,800	3.18×10^4	1,780,000,000	1.78×10^9
Venus	7,520	7.52×10^3	67,200,000	6.72×10^7

6.

Planet	Diameter, using <i>scientific notation</i>
Jupiter	8.89×10^4
Saturn	7.49×10^4
Uranus	3.18×10^4
Neptune	3.08×10^4
Earth	7.93×10^3
Venus	7.52×10^3
Mars	4.22×10^3
Mercury	3.03×10^3
Pluto	1.45×10^3

7.

Planet	Distance, using <i>scientific notation</i>
Mercury	3.63×10^7
Venus	6.72×10^7
Earth	9.3×10^7
Mars	1.42×10^8
Jupiter	4.84×10^8
Saturn	8.88×10^8
Uranus	1.78×10^9
Neptune	2.8×10^9
Pluto	3.67×10^9

8. **Bonus:** Scientific notation of numbers is useful for writing very small or very large numbers in a shorter form and in a more understandable manner.