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| Section 1: Write the following number sentences using exponents.   1. 8 X 8 X 8 X 8 X 8 \_\_\_\_\_\_\_\_ 2. 6 X 6 X 6 X 6 X 6 \_\_\_\_\_\_\_\_\_ 3. 4 X 4 X 4 X 4 X 4 X 4 X 4 X 4 \_\_\_\_\_\_\_\_   **Write** the following numbers, which are expressed in exponential notation, **in expanded form and find their value.**   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. 8³ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   Section 2: Scientific Notation  Write the following numbers in standard form.   1. 7.3 X 104 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. 9.23 X 108 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. 6.75 X 10-7 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. 4.5 X 10-3 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   Add or Subtract. Put your answer in scientific notation.  (2 x ) – (1.9 x ) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  (3.1 x ) + (2.4 x ) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Put the following numbers in scientific notation.   1. 7,100,000 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. 1,654,000,000 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. 0.00098 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. 0.0000075 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   Put in correct scientific notation. Correct the exponents.   1. 278 X 104 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. .0926 X 10-5 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. 300 X 1010  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. 0.6 X 10-4 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   Multiply or Divide. Put your answer in scientific notation.   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. ()(\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. Put the numbers in order from least to greatest. ,   ,  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Section 3: Irrational numbers.   1. http://2.bp.blogspot.com/_e-MNyCFKL20/TRExEPFcMKI/AAAAAAAAACI/_Jq4WRZ_44g/s1600/1-10_41660_lg.gifComplete the number line of perfect squares |
| Find the approximate square root of each number to the nearest tenth.   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. Circle the irrational numbers   http://crctlessons.com/images/repeating-decimals.jpg  3.14, 7, 1.92, ,  1.2367..., -8, -   1. Place the numbers on the number line:   , .5, - , , - , - , 2.3  http://exchangedownloads.smarttech.com/public/content/7f/7f8088d5-90d1-477b-b50f-6d2aef31569b/previews/medium/0002.png  Section 4 Expressions and Equations  Simplify   1. (-2)(4) + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. 7•2 + – 16 + (2-1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. 5 - + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   Solve   1. -7n – 3 = 25 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. – 4 = 12 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. 12 + =42 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. 3b -3(-23+2b) = 48 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 5. 5k + 3 = 2k + 1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Section 5: Word Problems  36. The area of the square rug in Milo’s classroom is . What is the length of each side of the rug? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  37. Marsha stores her school supplies in a cube shaped box with a volume of. She sees that each face of the box is a square. What is the length of each edge of the top of the box?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. Venus has an approximate distance from the sun of 7.23 X 105 miles. What is this expressed in standard form? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. The temperature of the core of the sun is 27,000,000ºF. What is this number expressed in scientific notation?   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Section 6: Exponent Rules  Simply. Write each answer as a single positive exponent.   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_      1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_      1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |