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| **Standard(s):****8.NS.1** |
| **Questions** | **Answers** |
| 1.List the values from least to greatest. $$5.3 ×10^{4}$$$$1.3 ×10^{-2}$$$$9.2 ×10^{3}$$$$2.7 ×10^{-3}$$ | 1 |
| 2. Identify the value $1.432×10^{-7}$ as rational or irrational.  | 2.  |
| 3. What are the proper real number system classifications of $4.2×10^{5}$? | 3.  |
| 4. There are 140,000,000 miles between Earth and Mars. Write this number in scientific notation.  | 4 |
| 5.The amount of water on the earth is about 1.4 x 108 square miles. Write this number in standard form.  | 5.  |
| **Standard(s):****8.EE.1** |
| **Questions** | **Answers** |
| 1. Simplify

$$5^{2}∙5^{-5}$$ | 1. |
| 1. Simplify

$$\left(\frac{(4x)^{3}}{x^{3}}\right)^{2}$$ | 2. |
| 1. Simplify

$$\frac{2^{-3}}{6^{2}}$$ | 3. |
| 1. Simplify

$$\frac{\left(3^{5}\right)^{3}}{(3^{6})(3^{5})}$$ | 4. |
| 1. Simplify

$$\frac{4^{2}}{5^{3}}$$ | 5. |

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| **Standard(s):****8.EE.3** |
| **Questions** | **Answers** |
| 1. There are about 100,000,000,000 trillion cells in the human body. Write this amount in scientific notation.  | 1. 1 x 1011 |
| 2. The population of the world is about 7 x 109 people. Write this value in standard form.  | 2.7,000,000,000 |
| 3. The distance from Earth to the sun is 9.3 x107 miles. Earth is 2.4 x105 miles from to the moon. Is Earth closer to the sun or the moon?  | 3.Moon |
| 4. An object weighs 2 x 104 lbs. How much does an object 300 times heavier weigh? Write your answer in scientific notation. | 4. 6 x 106 lbs.  |
| 5.In 1951, the UNIVAC I computer processed at 8 x 10-4 clock cycles per second. In 2013, Intel Core i7 processed at 8 clock cycles per second. How many times faster did the computer become over the years?  | 5. 10,000 times faster |
| **Standard(s):****8.EE.4** |
| **Questions** | **Answers** |
| 1. Multiply

$$(5.2 ×10^{4})(2.1 ×10^{-2})$$ | 1.092 x 103 |
| 1. Divide

$$\frac{8.4 × 10^{5}}{4.2 × 10^{-3}}$$ | 2.2 x 108 |
| 3. Sarah has about 7.2 x 106 hairs on her head. Sarah’s baby sister has about 3.2 x 104 hairs on her head. How much hair do they have altogether?  | 3.7.232 x 106 hairs |
| 4. Carlos is completing test corrections. He claimed the problem $\frac{9 ×10^{8}}{2 ×10^{2}}$ = $4.5 ×10^{4}$. What was Carlos’ error? | 4. Carlos divided the exponents instead of subtracting the exponents.  |
| 5. What number (in standard form) is equivalent to 7.31E-6 shown on a calculator screen? | 5.0.00000731 |