*Show all work to get answers.

Name _____   Date _____

LESSON 7.2

1. Internet Users The table shows the numbers of Internet users in selected countries in 2001.

Country	Albania	Jamaica	Marshall Islands	Romania
Internet Users	10^4	10^5	10^3	10^6

10^3 a. How many times greater is the number of users from Romania than the number of users from the Marshall Islands?

10^1 b. How many times greater is the number of users from Albania than the number of users from the Marshall Islands?

10^2 c. How many times greater is the number of users from Jamaica than the number of users from the Marshall Islands?

10^2 d. How many times greater is the number of users from Romania than the number of users from Albania?

10^3 **2. Area** The area of New Zealand is 104,454 square miles and the area of Saint Kitts and Nevis, islands in the Caribbean Sea, is 104 square miles. Use order of magnitude to estimate how many times greater New Zealand's area is than Saint Kitts and Nevis' area.

10^{12} **3. Large Numbers** Very large numbers are named differently in the American and British systems. In the American system, one quintillion is the name for the number 10^{18}. In the British system, one quintillion is the name for the number 10^{30}. How many times larger is one quintillion in the British system than in the American system?

4. Cell Phone Subscribers The table below shows the approximate number of cell phone subscribers in selected countries in 2001.

Country	Algeria	Dominican Republic	Poland	Solomon Islands
Number of subscribers	10^5	10^6	10^7	10^3

10^4
  a. How many times greater is the number of cell phone subscribers in Poland than in the Solomon Islands?

10^3
  b. How many times greater is the number of cell phone subscribers in the Dominican Republic than in the Solomon Islands?

10^2
5. U.S. Postal Service In 2004, the U.S. Postal Service handled 97,926,396 pieces of first class mail and 848,633 pieces of priority mail. Use order of magnitude to estimate how many times greater a volume of first class mail the U.S. Postal Service handled than the volume of priority mail.

$\dfrac{49x^6}{64y^{14}}$
  6. $\left(\dfrac{7x^3}{8y^7}\right)^2$

$\dfrac{27x^{11}}{200y^6}$
  7. $\left(\dfrac{3x^5}{10y^2}\right)^3 \cdot \dfrac{5}{x^4}$

$\dfrac{8x^5}{y^{15}}$
  8. $\dfrac{1}{4x^5} \cdot \left(\dfrac{2x^2}{y^3}\right)^5$