**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SOL 8.2**

**The Real Number System**

1) Describe each subset of the real number system and give an example and a non-example for each.

1)

2)

3)

4)

5)

2) Check off each set of numbers to which each real number belongs.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Natural | Whole | Integer | Rational | Irrational | Real |
| -8.5 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 215 |  |  |  |  |  |  |
| -0.14289367…. |  |  |  |  |  |  |

3) Name a number that is whole number but not a natural number \_\_\_\_\_\_\_\_\_\_\_\_

How do you know that number is a whole number but not a natural number?

4) Name a number that is a rational number but is not a whole number. \_\_\_\_\_\_\_\_

How do you know that number is a rational number but not a whole number?

5) **True or False.** Determine if the following statements are true or false. Then, explain your answer.

\_\_\_\_\_\_\_\_\_\_ a) The number -7.8 is a rational number.

Explain your answer. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_ b) The number 4.2222222… is an irrational number.

Explain your answer. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_ c) The number 0 is a natural number.

Explain your answer. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_ d) The number - is an integer.

Explain your answer. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_