Name _____ Date_____

Rational and Irrational Numbers Worksheet

1. What is another name for a ratio, such as $\frac{1}{2}$?

2. What is the root word in *Rational*?

3. Is the real number three fourths rational or irrational?

4. Is point five a rational or an irrational number?

5. Are whole numbers rational or irrational?

6. Complete the sentence: Rational numbers can be written as _____, irrational numbers cannot be written as _____.

Solve the following. Name the number set(s) that your answer belongs to.

7. $-12 + 10 =$ _____

8. $-16 - -29 =$ _____

9. $-11 \times -14 =$ _____

10. $-56 \div 8 =$ _____

11. $\frac{5}{8} \times -\frac{3}{5} =$ _____

12. $\sqrt{2} =$ _____

13. Collin needs to remember his password. He has a few clues to help him remember it. Here are the clues: It is a rational number. It is not an integer. It is not a natural number. It has a denominator of 2, it is positive, and it is less than 1. What is this real number? Spell out the number to reveal his password.

ANSWERS: Rational and Irrational Numbers Worksheet

1. What is another name for a ratio, such as $\frac{1}{2}$? **A Fraction**

2. What is the root word in *Rational*? **RATIO**

3. Is the real number three fourths rational or irrational? **RATIONAL; it is written as a fraction.**

4. Is point five a rational or an irrational number? **RATIONAL; .5 can be written as $\frac{1}{2}$.**

5. Are whole numbers rational or irrational? **RATIONAL; any whole number over 1 is a fraction.**

6. Complete the sentence: Rational numbers can be written as **A FRACTION**, irrational numbers cannot be written as **A FRACTION**.

Solve the following. Name the number set(s) that your answer belongs to.

7. $-12 + 10 = -2$ INTEGER, RATIONAL

8. $-16 - -29 = 13$ NATUARL, INTEGER, RATIONAL

9. $-11 \times -14 = 154$ NATURAL, INTEGER, RATIONAL

10. $-56 \div 8 = -7$ INTEGER, RATIONAL

11. $\frac{5}{8} \times -\frac{3}{5} = \frac{8}{40} = \frac{1}{5}$ RATIONAL

12. $\sqrt{2} = 1.414213563 \ldots$ IRRATIONAL

13. Collin needs to remember his password. He has a few clues to help him remember it. Here are the clues: It is a rational number. It is not an integer. It is not a natural number. It has a denominator of 2, it is a positive number, and it is less than 1. What is this real number? Spell out the number to reveal his password.

It's rational, but not an integer nor a natural number, so it must be a fraction. It has a denominator of 2, so it is something over two, $\frac{x}{2}$. It is positive and it is less than 1, so the numerator has to be one. Collins password is one half.