Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Per\_\_\_\_\_\_\_\_\_\_\_

**Integrated Algebra Quiz**

**Topic: Number Sets and Set Theory**

**Part I: Multiple Choice**

**Directions: Read each question carefully. Make sure to circle the letter of the correct response. Each correct answer is worth 2 points.**

1. Which of the following numbers would be considered irrational?
2. -12 b) -5 c) 0 d)
3. Set A = {-3, 5, 8, 9, 10) and Set B = {2, 5, 8, 11, 12}, find 
4. {-3, 5, 8, 9, 10} b) {5, 8}

c) {-3, 2, 5, 8, 9, 10, 11, 12} d) {5, 8, 9, 10}

1. Solve for x: 3x – 5x + 12 = 24 + 4x
2. 2 b) -6 c) -2 d) 6
3. Which of the following numbers would NOT be considered rational?
4. -3 b)  c) 2 d) 
5. Set A = {2, 4, 6, 8, 10} and Set B = {1, 3, 4, 5, 7, 8}, find the complement of A.
6. {2, 4, 6, 8, 10} b) {1, 3, 5, 7}
7. {1, 3, 5, 7, 8} d) {4, 8}

**Part II: Short/Extended Response**

**Directions: Read each question carefully. Make sure to show ALL work. A correct answer with NO work shown will only receive 1 point.**

1. Use the following sets to answer the questions below: (1 point each)

**A = {red, yellow, green, blue, orange} B = {pink, yellow, blue, green}**

**C = {orange, blue, green, gray, black}**

**Find  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Find  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Find the complement of A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. In complete sentences, **compare and contrast** the terms Union and Intersection when dealing with sets. (Make up your own sets for examples if that helps to guide you in answering the question) (3 points)

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Answer true or false**. If the answer is false, either correct the statement to make it true or **explain** why the statement would be false.

(1 point each)

1. Every irrational number is a real number \_\_\_\_\_\_\_\_\_\_\_\_\_
2. Every whole number is a counting number \_\_\_\_\_\_\_\_\_\_\_\_\_
3. Every natural number is a whole number \_\_\_\_\_\_\_\_\_\_\_\_\_\_