

## Math Grades 5 – 9

Logic/Application problem

### ***Sylvie and Bruno***

Chapter 18: “Queer Street, Number Forty”

Lewis Carroll


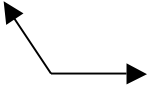
#### **Directions:**

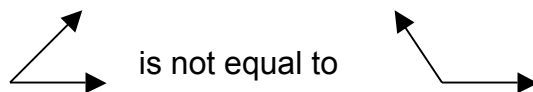
The students will explore the mathematics found in ***Sylvie and Bruno*** Chapter 18: “Queer Street, Number Forty”. Have students read the poem and answer the following questions.

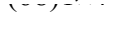
1. Decide if the following excerpt from ***Sylvie and Bruno*** is true or false. Give examples to support your answer. “Well,” said Arthur, “do you accept it as self-evident? Is it as obvious, for instance, as that ‘things that are greater than the same are greater than one another?’”
2. Decide if the following excerpt from ***Sylvie and Bruno*** is true or false. Use words or drawings to support your answer. “Nor to prove that ‘all angles are equal’, I suppose?”
3. Arthur said, “that the trains go every ten minutes.” If the first train run is at 9:00am and the last is at 5:00pm, how many train runs are there for the day?

#### **Solutions:**

1. False. It cannot be said that just because two quantities are greater than another, then they are greater than each other. For example  $7 > 4$  and  $8 > 4$ . It cannot be concluded that  $7 > 8$ . Another example:  $6 > 2$  and  $9 - 3 > 2$ . It cannot be concluded that  $6 > 9 - 3$ .

2. False. All angles are not equal. For example,  is not equal to . Another example:



3. 49. Each hour there are 6 runs (For example, during the 9:00 hour there are runs at 9:00, 9:10, 9:20, 9:30, 9:40, 9:50 and during the 10:00 hour there are runs at 10:00, 10:10, 10:20, 10:30, 10:40, 10:50). Hence, from 9:00am until 4:50pm there are 48 runs  for 5:00pm.