

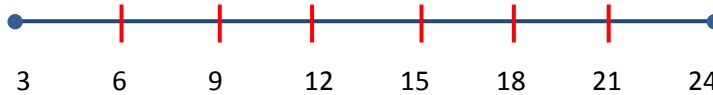
Name \_\_\_\_\_

Date \_\_\_\_\_

**Relative Conditional Probability - Step-by-Step Lesson**

A real number value on the line segment is chosen at random. The line segment has single digit intervals that are grouped together.

What is the probability it is between 8 and 24?

**Explanation:**

The segment between 8 and 24 is completely contained in the total segment. The length of the shorter segment is the absolute value of the difference between its left endpoint and right endpoint, which is

$$|8 - 24| = 16.$$

Similarly, the total length of the segment is  $|3 - 24| = 21$ .

Divide the lengths to find the probability that a randomly chosen point between 3 and 24 is also between 8 and 24.

The probability is  $\frac{16}{21}$ .

So, the answer is  $\frac{16}{21}$ .

