Name: _____   **Dividing on a Number Line**

Let's say that I want to divide 15 by 3 on a number line. How do I do it?

  Example: Solve 15 ÷ 3 using a number line.

I start at the number 15 (the dividend) on the number line, and I move backwards in jumps of 3 (the divisor) until I reach zero, or until I come as close as possible to zero (i.e. until I cannot take another whole jump of 3).
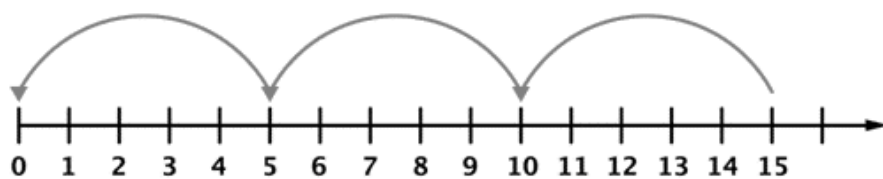
The total number of jumps I take is the quotient (answer).

Here it took **5** jumps of 3 to reach zero.

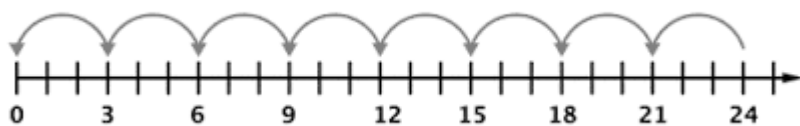**15 ÷ 3 = 5**

Now, let's divide 15 by 5 using a number line.

Now it takes **3** jumps of 5 to reach zero.

15 ÷ 5 = 3

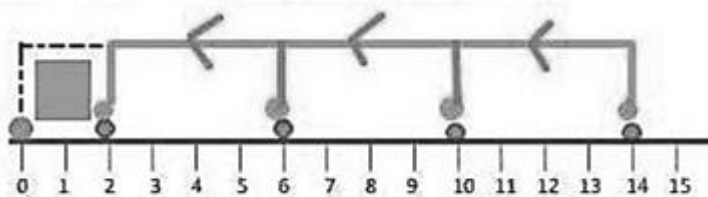1. What division problem is represented on the number line below?
    <u>Remember</u>: *The starting point is the dividend; the size of each jump is the divisor, the number of jumps is the quotient.*

____ ÷ ____ = ____

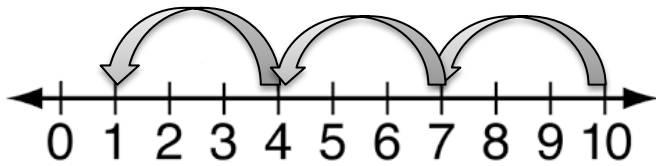Let's try dividing 14 by 4 on the number line. We start at 14 and move backward in steps of 4. Notice what happens. After 3 jumps of 4, we must stop. We cannot take another whole jump of 4, but we have not reached zero. There are 2 units left to go. Those 2 units are our *remainder*. The *quotient* is 3.

Remainder = 2   Quotient = 3

14 ÷ 4 = 3 R2

2. What division problem is shown on this number line?

0 1 2 3 4 5 6 7 8 9 10   _____ ÷ _____ = _____ R____

3. Use the number line below to find 22 ÷ 5.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

22 ÷ 5 = _____ R_____

4. Using the number line below, solve 19 ÷ 9 = _____ R_____

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

5. Use the number line below to solve 21 ÷ 6 = _____ R_____

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

NOTE: What we have been doing here is using repeated subtraction to divide. We see how many times we can subtract the divisor from the dividend before we must stop. The number we stop at is the remainder.