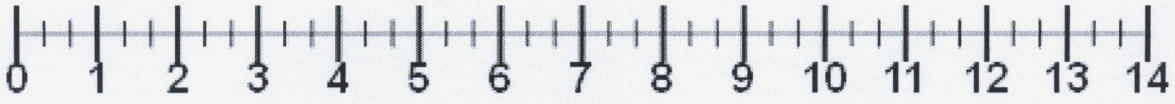
Multiplying a Number Times a Fraction and Multiplying a Fraction Times a Number

1. Show $6 \times \frac{2}{3}$ on a number line.

2. Show $\frac{2}{3} \times 6$ on a number line.

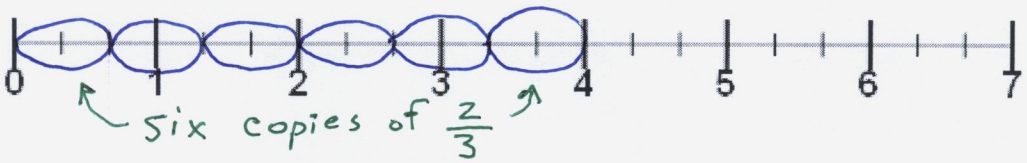
3. Show $\frac{2}{3} \times 12$ on a number line.



ANSWERS

1. Show $6 \times \frac{2}{3}$ on a number line.

$6 \times \frac{2}{3} = 4$



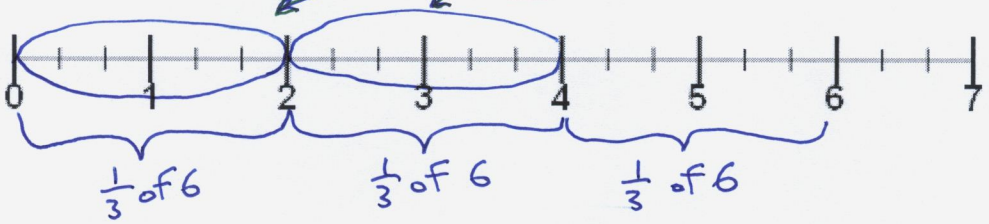
another way

$6 \times \frac{2}{3} = 4$

$6 \times \frac{2}{3} = \frac{12}{3}$ which is 12 copies of $\frac{1}{3}$

2. Show $\frac{2}{3} \times 6$ on a number line.

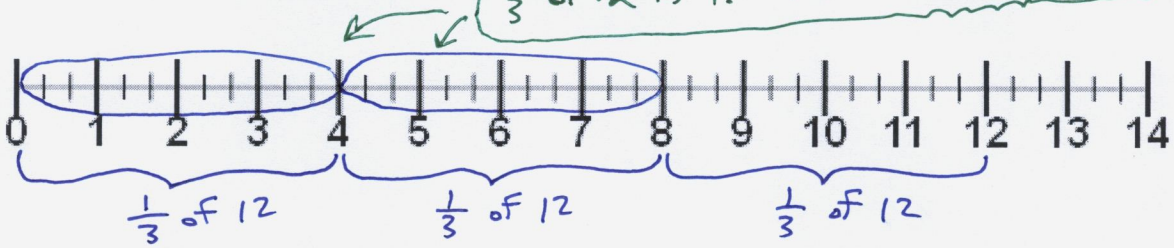
$\frac{1}{3}$ of 6 is 2. Take 2 of them



$\frac{2}{3} \times 6 = 4$

3. Show $\frac{2}{3} \times 12$ on a number line.

$\frac{1}{3}$ of 12 is 4. Take 2 of these.



$\frac{2}{3} \times 12 = 8$

4.NF.4**b**. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

b. Understand a multiple of *a*/*b* as a multiple of 1/*b*, and use this understanding to multiply a fraction by a whole number. *For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5), recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.)*

5.NF.4a. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.

a. Interpret the product (*a*/*b*) × *q* as *a* parts of a partition of *q* into *b* equal parts; equivalently, as the result of a sequence of operations *a* × *q* ÷ *b*. *For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)*