

There are different ways of indicating multiplication.

$$2 \ 3$$

$$2 \ 3$$

$$2(3)$$

$$(2)(3)$$

All these expressions are telling you to "multiply 2 times 3".

What does multiplication mean?

$$2 \times 3 = \quad + \quad +$$

$$3 \times 2 = \quad +$$

$$\text{Note: } 2 \times 3 = 3 \times 2$$

The Commutative Property
for Multiplication

=

4 x 3

4 x 4

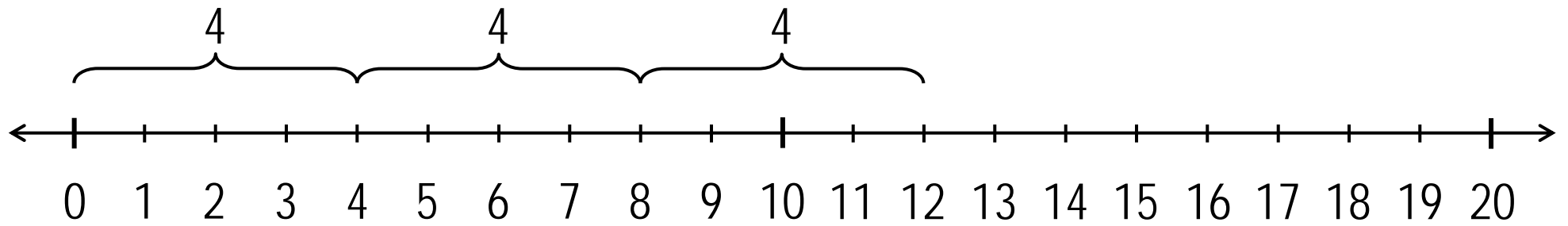
4 x 5

4 x 6

4 x 7

4 x 8

12



$$4 \times 8 = 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 = 32$$

$$4 \times 9 = 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 =$$

$$4 \times \quad = 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 =$$

$$4 \times \quad = 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 =$$

$$4 \times \quad = 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 =$$

$$4 \times \quad = 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 =$$

$$7 \times 8 = 70 - 14 =$$

$$7 \times 9 = 70 - 7 =$$

$$7 \times 10 =$$

$$7 \times 11 = 70 + 7 =$$

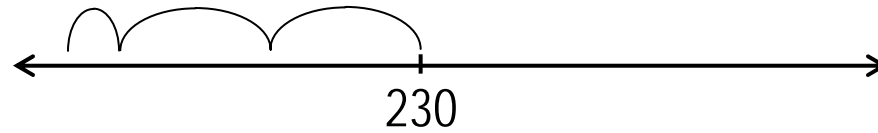
$$7 \times 12 = 70 + 14 =$$

$$8 \times 7 = 8 + 8 + 8 + 8 + 8 + 8 + 8 =$$

$$11 \times 12 = 11 + 11 + 11 + 11 + 11 + 11 + 11 + 11 + 11 + 11 + 11 + 11 =$$

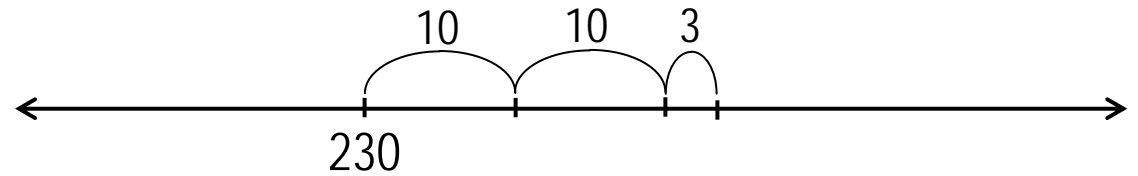
$$12 \times 11 = 12 + 12 + 12 + 12 + 12 + 12 + 12 + 12 + 12 + 12 + 12 =$$

$$23 \times 9 = 230 - 23 = 207$$



$$23 \times 10 = 230$$

$$23 \times 11 = 230 + 23 = 253$$



$$23 \times 12 = 230 + 46 = 276$$

