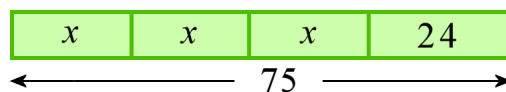# More Equations

Think of this bar model as being a board of a certain length. We can write an equation about it. Notice, its TOTAL length is 75. All those "blocks" added together equal 75:

| x | x | x | 24 |

←————— 75 —————→

$$x + x + x + 24 = 75$$

Then, $x + x + x$ is the same as $3x$ or 3 times x. We omit the multiplication sign between a number and a letter. So, the equation can also be written as

$$3x + 24 = 75.$$

How can you solve it?

Take away the block with 24. Then, the total for the 3 x's must be 51 (because $75 - 24 = 51$). Then you just have to find a number so that 3 times the number is 51. Guess and check!

1. Match one equation with each bar model. Then, solve for y.

Equations:

$6y + 12 = 78$

$6 \times 12 + y = 78$

a.

| y | y | y | y | y | y | 12 |

←————— 78 —————→

b.

| 12 | 12 | 12 | 12 | 12 | 12 | y |

←————— 78 —————→

2. Write an equation for each bar model. Then, solve for x.

a.

| x | x | x | x | 142 |

←————— 298 —————→

b.

| x | x | 120 |

←————— 230 —————→