

## Multiply, and Divide 11 & 12

### Mental Math Strategy

**When to use this strategy:** Use this strategy to multiply or divide by 11 or 12.

**How to use this strategy:** For multiplication, use the break-apart strategy. That is,  $a(12) = a(10 + 2) = 10a + 2a$ . To divide, *think multiplication*. For  $48/12$ , fill in the blank  $12 \times \underline{\quad} = 48$ .

**Examples:**  $12 \times 7 = 10 \times 7 + 2 \times 7 = 70 + 14 = 84$      $11 \times 9 = 10 \times 9 + 1 \times 9 = 90 + 9 = 99$      $48/12 = 4$

Use this (new) strategy on the following:	
1.) Solve: $\frac{d}{11} + 2 = 9$	2.) Evaluate $(1.1 \times 10^5)(1.2 \times 10^6)$
3.) If one knot takes up $\frac{3}{4}$ ft of rope, how much rope would you need to make 11 knots?	4.) If there are eight 12-point quizzes, what is the total number of points for quizzes?

Use any strategy you know on the following:	
5.) Solve: $12x = 132$	6.) Solve for x $(1.2 \times 10^{34})(2 \times 10^x)$ $= 2.4 \times 10^{100}$
7.) $-19 + (-18)$ $+ (-17) =$	8.) The distance of the Amazon River is 3,977 miles. The distance of the Mississippi River is 2,320 miles. About how much longer is the Amazon River than the Mississippi River?