

## Patterns on the Multiplication Table

Look at the 10 Facts Chart.

10 Facts Chart

$0 \times 10$	$1 \times 10$	$2 \times 10$	$3 \times 10$	$4 \times 10$	$5 \times 10$	$6 \times 10$	$7 \times 10$	$8 \times 10$	$9 \times 10$	$10 \times 10$	$11 \times 10$	$12 \times 10$
0	10	20	30	40	50	60	70	80	90	100	110	120

**The product of any number by 10 is the number itself with a zero to its right.**

You can use the basic facts for 10 and a model or other facts to help you find the product of factors greater than 10.

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Let us find the product of 12 and 11

### STEP 1

Write an addition expression

$$(10 + 2) \times 11$$

using break apart numbers.

### STEP 2

Use the 10 Facts Chart and model

$$(10 \times 11) + (2 \times 11) = \_\_? \_\_$$

a model to find the products.

### STEP 3

Find the sum of the products.

$$110 + 22 = 132$$

**So,  $12 \times 11 = 132$**

Examples:

A- Find the product or the quotient.

1)  $12 \div 2$   
6

2)  $7 \times 11$   
77

3)  $88 \div 11$   
8

4)  $72 \div 12$   
6

B- Multiply the input by 11

Input	4	8	12
Output	<u>44</u>	<u>88</u>	<u>132</u>

C- Divide the output by 12

Input	6	<u>7</u>	8
Output	<u>72</u>	84	<u>96</u>