Finding Factors using Multiplication

How can you use multiplication to find all the factors of a number?

Jenny has 16 action figures. She wants to arrange them in equal sized groupings around her room. What are the ways that Jenny can arrange the action figures? Jenny needs to think of all the factors of 16.
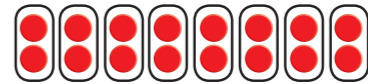
16 action figures

$16 = 1 \times 16$

Jenny can arrange 16 figures in 1 group or 16 groups of 1 figure.
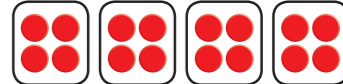
So, 1 and 16 are factors of 16.

$16 = 2 \times 8$

Jenny can arrange 2 figures in 8 groups
or
2 groups of 8 figures.

So, 2 and 8 are factors of 16.

$16 = 4 \times 4$

Jenny can arrange 4 figures in 4 groups.

4 is a factor of 16.

The factors of 16 are 1, 2, 4, 8 and 16.