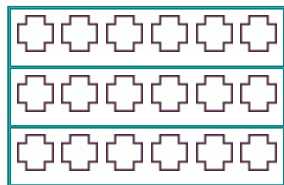


# Multiplication as an Array

An **array** is an orderly arrangement of things in rows and columns. When things are aligned in an array, we can treat the *rows like groups*, so an array still pictures multiplication as repeated addition.



3 rows, 6 crosses in each row.

$$6 + 6 + 6 =$$

$$3 \times 6 = 18$$



4 rows, 8 camels in each row.

$$8 + 8 + 8 + 8 =$$

$$4 \times 8 = 32$$

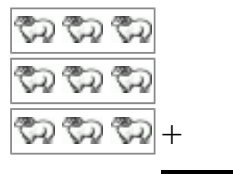
1. Fill in the missing numbers.



a. \_\_\_ rows, \_\_\_ carrots in each row.

$$\underline{\quad} + \underline{\quad} \text{ carrots}$$

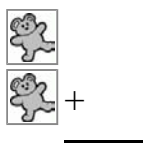
$$\underline{\quad} \times \underline{\quad} \text{ carrots} = \underline{\quad}$$



b. \_\_\_ rows, \_\_\_ rams in each row.

$$\underline{\quad} + \underline{\quad} + \underline{\quad} \text{ rams}$$

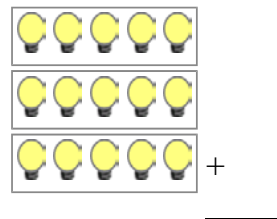
$$\underline{\quad} \times \underline{\quad} \text{ rams} = \underline{\quad}$$



c. \_\_\_ rows, \_\_\_ bear in each row.

$$\underline{\quad} + \underline{\quad} \text{ bears}$$

$$\underline{\quad} \times \underline{\quad} \text{ bears} = \underline{\quad}$$



d. \_\_\_ rows, \_\_\_ lightbulbs in each row.

$$\underline{\quad} + \underline{\quad} + \underline{\quad} \text{ bulbs}$$

$$\underline{\quad} \times \underline{\quad} \text{ lightbulbs} = \underline{\quad}$$