

# Mathematics Glossary » Table 2

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Common multiplication and division situations. <sup>1</sup>

	<b>UNKNOWN PRODUCT</b>	<b>GROUP SIZE UNKNOWN (“HOW MANY IN EACH GROUP?” DIVISION)</b>	<b>NUMBER OF GROUPS UNKNOWN (“HOW MANY GROUPS?” DIVISION)</b>
	<b><math>3 \times 6 = ?</math></b>	<b><math>3 \times ? = 18</math>, and <math>18 \div 3 = ?</math></b>	<b><math>? \times 6 = 18</math>, and <math>18 \div 6 = ?</math></b>
<b>EQUAL GROUPS</b>	There are 3 bags with 6 plums in each bag. How many plums are there in all? <i>Measurement example.</i> You need 3 lengths of string, each 6 inches long. How much string will you need altogether?	If 18 plums are shared equally into 3 bags, then how many plums will be in each bag? <i>Measurement example.</i> You have 18 inches of string, which you will cut into 3 equal pieces. How long will each piece of string be?	If 18 plums are to be packed 6 to a bag, then how many bags are needed? <i>Measurement example.</i> You have 18 inches of string, which you will cut into pieces that are 6 inches long. How many pieces of string will you have?
<b>ARRAYS<sup>2</sup>, AREA<sup>3</sup></b>	There are 3 rows of apples with 6 apples in each row. How many apples are there? <i>Area example.</i> What is the area of a 3 cm by 6 cm rectangle?	If 18 apples are arranged into 3 equal rows, how many apples will be in each row? <i>Area example.</i> A rectangle has area 18 square centimeters. If one side is 3 cm long, how long is a side next to it?	If 18 apples are arranged into equal rows of 6 apples, how many rows will there be? <i>Area example.</i> A rectangle has area 18 square centimeters. If one side is 6 cm long, how long is a side next to it?
<b>COMPARE</b>	A blue hat costs \$6. A red hat costs 3 times as much as the blue hat. How much does the red hat cost? <i>Measurement example.</i> A rubber band is 6 cm long. How long will the rubber band be when it is stretched to be 3 times as long?	A red hat costs \$18 and that is 3 times as much as a blue hat costs. How much does a blue hat cost? <i>Measurement example.</i> A rubber band is stretched to be 18 cm long and that is 3 times as long as it was at first. How long was the rubber band at first?	A red hat costs \$18 and a blue hat costs \$6. How many times as much does the red hat cost as the blue hat? <i>Measurement example.</i> A rubber band was 6 cm long at first. Now it is stretched to be 18 cm long. How many times as long is the rubber band now as it was at first?
<b>GENERAL</b>	<b><math>a \times b = ?</math></b>	<b><math>a \times ? = p</math> and <math>p \div a = ?</math></b>	<b><math>? \times b = p</math>, and <math>p \div b = ?</math></b>

<sup>1</sup> The language in the array examples shows the easiest form of array problems. A harder form is to use the terms rows and columns: The apples in the grocery window are in 3 rows and 6 columns. How many apples are in there? Both forms are valuable.

<sup>2</sup> Area involves arrays of squares that have been pushed together so that there are no gaps or overlaps, so array problems include these especially important measurement situations.

<sup>3</sup> The first examples in each cell are examples of discrete things. These are easier for students and should be given before the measurement examples.

