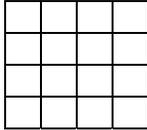


**TYPES OF MULTIPLICATION & DIVISION
WORD PROBLEMS**

PROBLEM TYPE			
Asymmetrical	<p><i>Equal Grouping</i></p> <p><u>Partitive Division</u> <i>Size of one group is unknown.</i></p> <p>Twenty-four apples need to be placed into eight paper sacks. How many apples will you put in each sack if you want the same number in each sack?</p> <p><u>Quotative Division</u> <i>Number of equal groups is unknown.</i></p> <p>I have 24 apples. How many paper sacks will I be able to fill if I put 3 apples into each sack?</p>	<p><i>Rate</i></p> <p><u>Partitive Division</u> <i>Size of one group is unknown</i></p> <p>On the Hollinger’s trip to New York City, they drove 400 miles and used 12 gallons of gasoline. How many miles per gallon did they average?</p> <p><u>Quotative Division</u> <i>Number of equal groups is unknown.</i></p> <p>Jasmine spent \$100 on some new CDs. Each CD cost \$20. How many did she buy?</p>	<p><i>Multiplicative Compare</i></p> <p><i>The amount in each group or the comparison factor is missing.</i></p> <p>Elizabeth read 48 books during summer vacation. This is 4 times as many as Catherine. How many books did Catherine read during summer vacation?</p> <p>Elizabeth read 48 books during summer vacation. Catherine read 12 books during summer vacation. How many times greater is the number of books Elizabeth read compared with the number of books Catherine read?</p>

**TYPES OF MULTIPLICATION & DIVISION
WORD PROBLEMS**

PROBLEM TYPE		
Symmetrical	<p><i>Rectangular Array/Area Problems</i> <i>Role of the factors is interchangeable.</i></p> <p>Label the 2 sides of the array and determine the total number of square units in the array.</p> <div style="text-align: center;">  </div>	<p><i>Cross Product</i> <i>Involves a number of combinations and neither factor is clearly the multiplier.</i></p> <p>Pete’s Deli stocks four types of cold cuts and two types of cheese. How many different sandwiches consisting of one type of meat and one type of cheese are possible?</p>
	<p><i>Missing Factor Division Problems</i></p> <p>Susan has 24 different outfits consisting of a blouse and a pair of pants. She has 4 pairs of pants. How many blouses does she own?</p>	

[Adapted from: Math Matters, Grades K-6, Math Solutions Publications]