



# EHSS Problem Solving Strategies



## ACT IT OUT

Acting a problem out while you are trying to solve a problem helps you to see the problem. This allows you to develop visual images of both the data in the problem and the solution process. This helps me to find the answer.



# *EHSS Problem Solving Strategies*

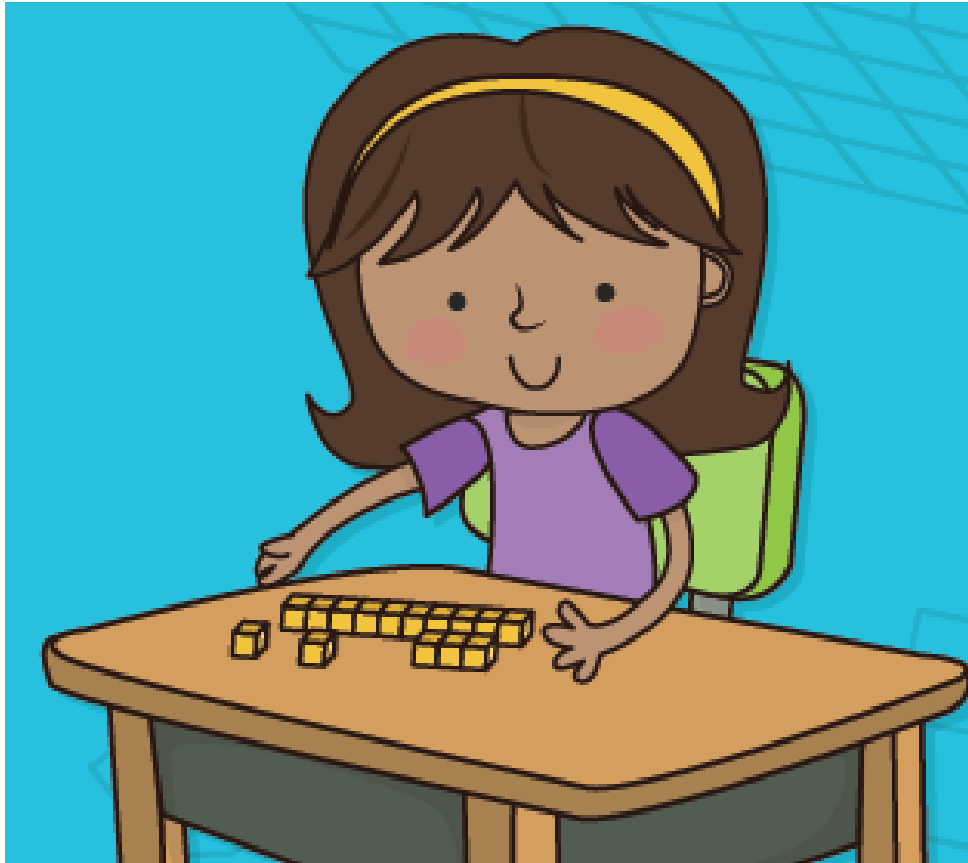


## *DRAW A PICTURE*

*Drawing a picture or diagram helps me to see the problem. This helps me to find the answer.*



# *EHSS Problem Solving Strategies*



## ***MAKE IT***


















*You may find it helpful to move objects around while you are trying to solve a problem.*

*This allows you to develop visual images of both the data in the problem and the solution process.*

# *EHSS Problem Solving Strategies*

input	output
1	3
2	4
3	5
4	6



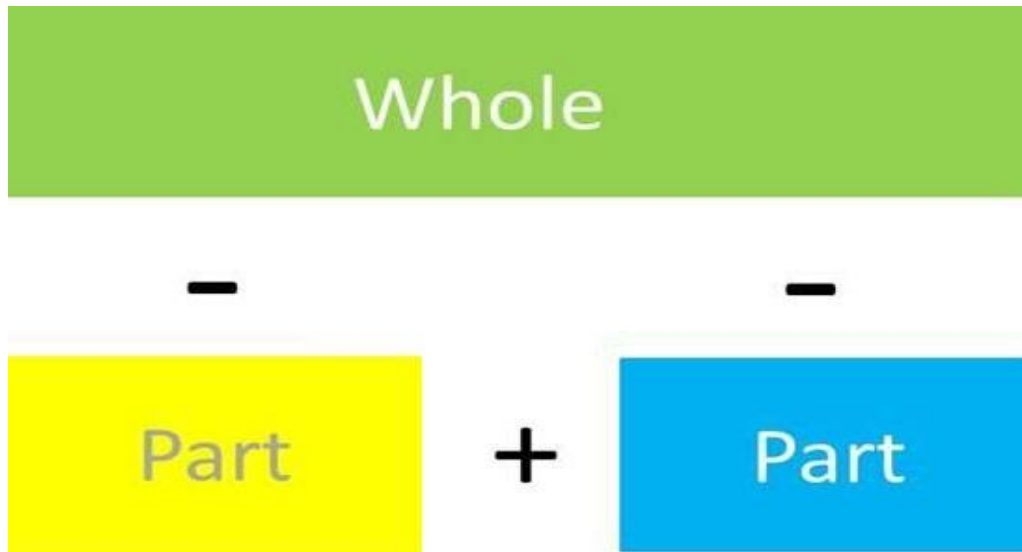
apple						
orange						
grape						
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

## *DRAW A DIAGRAM, LIST OR TABLE*

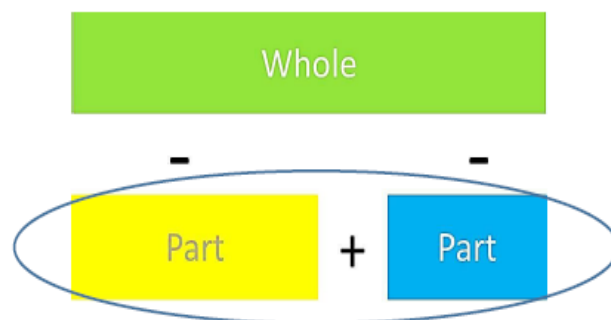
*A table, list or diagram displays information so that it is easy to locate and understand.*

*Missing information becomes obvious and can help to detect patterns.*

# *EHSS Problem Solving Strategies*

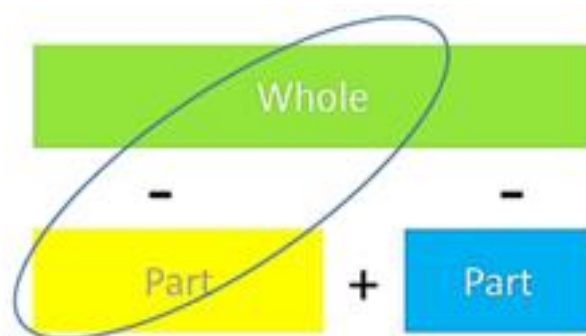


$$\textit{Part} + \textit{Part} = \textit{Whole}$$



If all parts are given they can be added to find the whole.

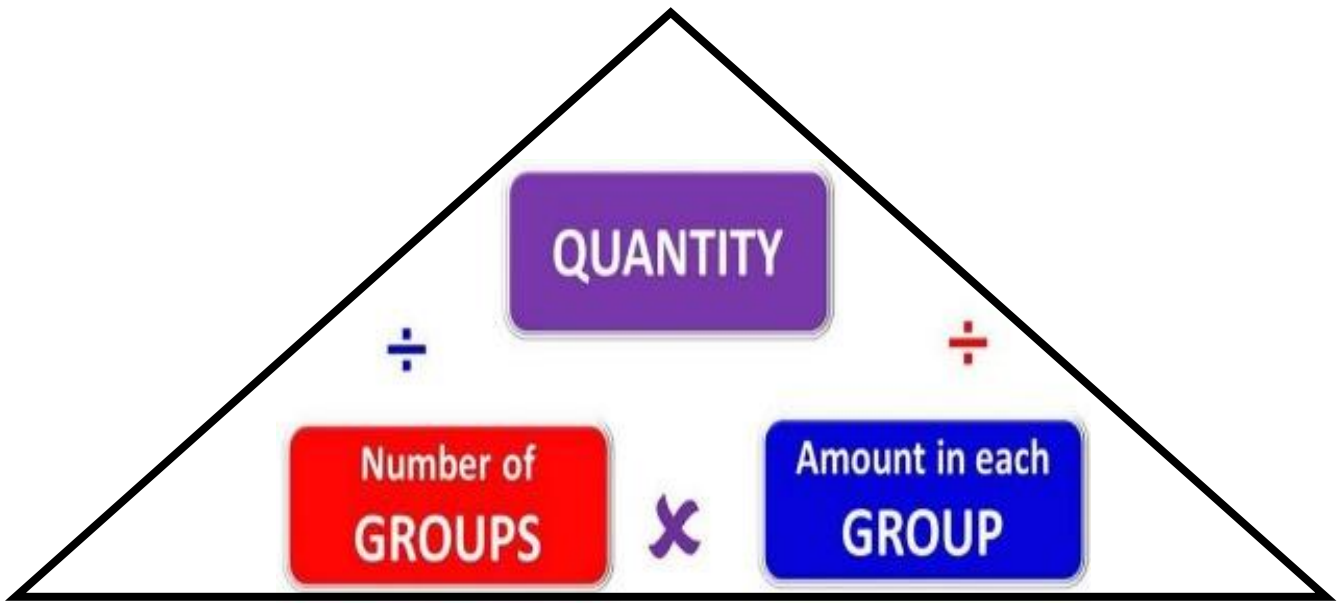
If the whole quantity is unknown, addition is required.



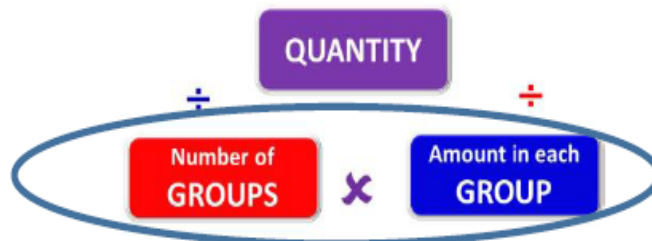
If one part and the whole are given, the given part can be subtracted from the whole.

If one of the parts is unknown, subtraction is required.

# EHSS Problem Solving Strategies

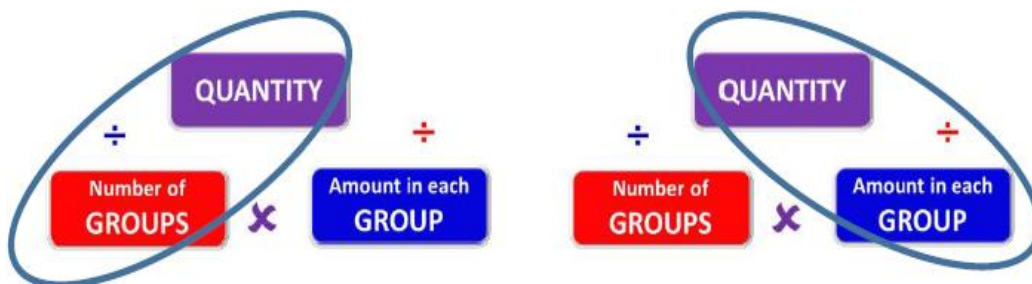


## Multiplication And Division Triangle (MAD-T)



If the Number of Groups and the Amount in Each Group is given, they can be multiplied to find the Quantity .

If the quantity is unknown, multiplication is required.



If the *Quantity* is known and either the *Number of Groups* OR the *Amount in each group* is also known, division is required.



# *EHSS Problem Solving Strategies*



## *GUESS, CHECK AND REFINE*

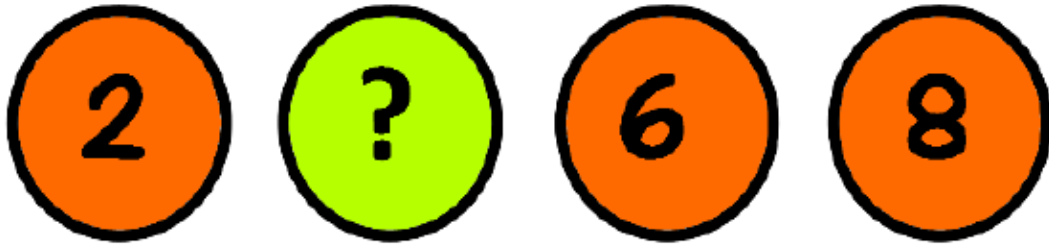
*Guess, check and refine is a problem solving strategy that can help you get started.*

*All you need to do is to make a reasonable guess of the answer and then check the guess against the conditions of the problem.*

*If your first guess is not correct, at least one possible answer is eliminated and you may have obtained further information that may lead to the correct answer.*



# *EHSS Problem Solving Strategies*



## *FIND A PATTERN*

*You can often simplify a difficult problem by identifying a pattern in it and then applying that pattern to the problem situation.*

*By finding the pattern, you can predict what will "come next" and what will happen again and again in the same way.*





# *EHSS Problem Solving Strategies*

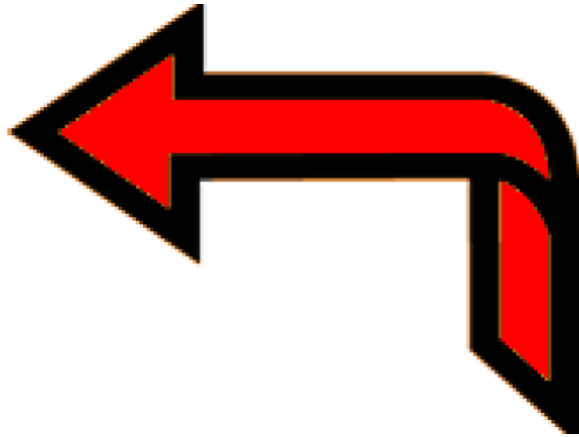
$$4 + 2 = 6$$

## *WRITE A NUMBER SENTENCE*

*A number sentence is an arrangement of numbers and symbols to represent a problem. You can use a number sentence to record the process of solving the problem.*



# EHSS Problem Solving Strategies



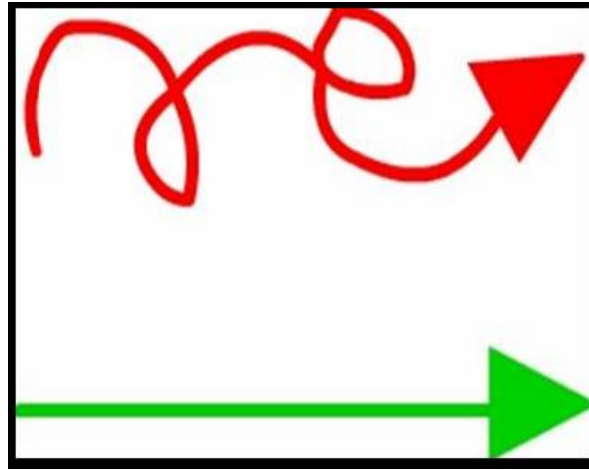
## WORKING BACKWARDS

To solve these problems it is usually necessary to start with the answer and work methodically backwards to fill in the missing information.

You can start with the final number in the question. Work backwards, undoing each step until you get back to the start.



# *EHSS Problem Solving Strategies*



## *SOLVE A SIMPLER OR SIMILAR PROBLEM*

*Making a problem simpler may mean reducing large numbers to small numbers, or reducing the number of items given in a problem. Smaller numbers may help you see what comes next.*