

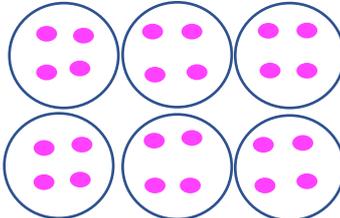
A Multiplicative Program to consider

There are six cars in the carpark, how many wheels are there in total?

These are some examples of a multiplicative solution

<p>Example 1</p> $6 \times 4 = 24$	<p>Example 2</p> $2 \times 6 = 12$ $2 \times 6 = 12$ Total $12 + 12 = 24$	<p>Example 3</p> <div style="text-align: center;">4</div> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table> <div style="text-align: right; margin-right: 20px;">6</div>																								

These are some examples of an additive solution

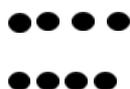
<p>Example 4</p> $4 + 4 + 4 + 4 + 4 + 4 = 24$	<p>Example 5</p> <p>4, 8, 12, 16, 20, 24</p>	<p>Example 6</p> 
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The additive strategy is reliant on making all the numbers and counting all. While this works for smaller numbers, this is an early development of multiplication and is an inefficient strategy for larger numbers. Our goal in Year 5 is to support students to develop multiplicative strategies to support the development of flexible strategies.

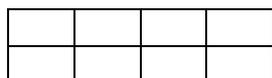
Here are some strategies you can use to help support the development of multiplicative thinking:

- Support transition from only using skip counting or groups of pictures for multiplication to strategies for multiplication, from this: (3, 6, 9, 12) to this $3 \times 4 = 12$ double 3 equals 6, double 6 equals 12)
- Use arrays or area models as images for multiplication rather than groups of:

Arrays



Area model (regions)



- Try some of the strategies below to help with the following facts:

Facts for multiplying by 2	Double numbers , think 2 of any number is a double eg. 2 sevens double 7 equals 14
Facts for multiplying by 3	Double numbers and add one more group , think 3 of any number is to double the number and add one more group eg. 3 eights are double 8 equals 16 add (1 more 8) equals 24
Facts for multiplying by 4	Double double numbers , think 4 of any number is double and double again eg. 4 sixes double 6, 12 double 12 equals 24
Facts for multiplying by 5	Relate to tens facts , think 5 of any number is half of 10 of the same number eg. 5 eights is half of 10 eights, equals 40
Facts for multiplying by 6	Multiply by 3 and double again , think 6 of any number is double 3 of any number eg. 3 eights are 24, double 24 equals 48
Facts for multiplying by 8	Double double double , think 8 of any number is double double double eg. 8 fours, double 4 equals 12, double 12 again equals 24, double 24 equals 48