

## Lesson 7: Multiplying more than two numbers (I)

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- $4 \times 2 \times 4 = 32$ ,  $8 \times 4 = 32$
  - $3 \times 5 \times 3 = 45$ ,  $15 \times 3 = 45$  (numbers may be multiplied in a different order)
- Diagram showing 2 boxes of chocolates with each box showing 12 chocolates in an array.
- Explanations will vary. Look for children who identify in their answer that doubling or multiplying by 2 is a relatively easy multiplication, even for numbers with 2 or more digits. By multiplying 7 by 9 Aki did the harder multiplication first and then doubled it.
- $5 \times 2 \times 11 = 110$  (numbers may be multiplied in a different order). There are 110 candles in total.
- $2 \times 4 \times 6 = 48$
  - $80 = 8 \times 5 \times 2$
  - $4 \times 5 \times 5 = 100$
  - $5 \times 7 \times 3 = 105$
  - $72 = 9 \times 2 \times 4$
  - $9 \times 2 \times 8 = 144$
- $4 \times 4 \times 2 = 32$
  - $2 \times 7 \times 5 = 70$
  - $2 \times 7 \times 5 = 70$
  - $54 = 3 \times 9 \times 2$
  - $7 \times 0 \times \text{any number} = 0$
  - $36 = 6 \times 1 \times 6$
- The answer is 0 regardless of the order.  
Explanations may vary; for example:  
 $0 \times \text{any number} = 0$ , so there is no need to work out the product of the other numbers as multiplying by 0 will give a final product of 0 in any case.
- There are 12 possible ways to complete the calculation using single-digit numbers:  

$3 \times 8 \times 9 = 216$	$4 \times 6 \times 9 = 216$
$3 \times 9 \times 8 = 216$	$4 \times 9 \times 6 = 216$
$8 \times 3 \times 9 = 216$	$6 \times 4 \times 9 = 216$
$8 \times 9 \times 3 = 216$	$6 \times 9 \times 4 = 216$
$9 \times 3 \times 8 = 216$	$9 \times 4 \times 6 = 216$
$9 \times 8 \times 3 = 216$	$9 \times 6 \times 4 = 216$

### Reflect

Different methods are possible; however the most efficient method is to work out  $2 \times 5 = 10$  and  $8 \times 9 = 72$  and then multiply these answers together.  
 $2 \times 8 \times 5 \times 9 = 10 \times 72 = 720$