

# OPERATIONS AND ALGEBRAIC THINKING

<b>NC.4.OA.1</b>	Interpret a multiplication equation as a comparison. Multiply or divide to solve word problems involving multiplicative comparisons using models and equations with a symbol for the unknown number. Distinguish multiplicative comparison from additive comparison.
<b>DESCRIPTION</b>	An anchor chart is a great way to help students see scenarios where the unknown portion of the problem changes and how the required math changes as a result.

Multiplicative Comparisons

larger part: Jordan has 12 apples.  
Lauren has 5 times as many.  
How many apples does Lauren have?  
equation:  $12 \times 5 = \underline{60}$  ← larger part unknown

smaller part: Tyler has 60 apples.  
Lauren has 5 times less apples.  
How many apples does Lauren have?  
equation:  $60 \div 5 = 12$  ← smaller part unknown

multiplier: Jordan has 60 apples.  
Tyler has 15 apples. How many times more apples does Jordan have?  
equation:  $60 \div 15 = 4$  ← multiplier unknown

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<p><b>NC.4.OA.1</b></p>	<p>Interpret a multiplication equation as a comparison. Multiply or divide to solve word problems involving multiplicative comparisons using models and equations with a symbol for the unknown number. Distinguish multiplicative comparison from additive comparison.</p>
<p><b>DESCRIPTION</b></p>	<p>An anchor chart uses bar models to help students make sense of word problems so that they can identify the unknown and the action required to find its value.</p>

**Multiplicative Comparisons**  
**Multiply or Divide?**

Large Part Unknown

Tom ran 4 laps around the football field. Sam ran 5 times as many laps as around as Tom.  
How many laps did Sam run?  $4 \times 5 = 20$  laps

Tom: 4 laps

Sam: 4 laps 4 laps 4 laps 4 laps 4 laps

Small Part Unknown

A family size pizza is \$24 and costs 3 times as much as a small pizza. How much does a small pizza cost?  
 $24 \div 3 = 8$

Small Pizza: 8

Family Size Pizza: 8 8 8 = \$24

Multiplier Unknown

A single rose cost \$3 and a bunch of roses costs \$12. How many times as much does the bunch of roses cost than the single rose?

Single Rose: \$3

Bunch Roses: \$3 \$3 \$3 \$3 = \$12

$12 \div 3 = 4$        $3 \times \underline{\quad} = \$12$