

## Year 3 Rubric – Four Operations and Mental Multiplication & Division

	<b>Multiplies whole numbers</b>	<b>Models division of whole numbers</b>	<b>Selects an appropriate method for solving a problem</b>	Uses efficient <b>mental computation</b> strategies to <b>multiply</b> whole numbers	Uses efficient <b>mental computation</b> strategies to <b>divide</b> whole numbers
<b>Advanced</b>	<ul style="list-style-type: none"> <li>Explains what multiplication is</li> <li>Explains the relationship between multiplication and addition</li> <li>Explains the relationship between table facts (e.g. can make a connection between the 5x and the 10x)</li> <li>Memorizes, practices and recalls timetables to 10x10</li> <li>Multiplies by 10 and 100 (using place value)</li> <li>Uses factors and multiples of numbers</li> <li>Multiplies 2, 3 and 4 digit numbers by 1 digit</li> <li>Multiplies 2 digit by 2 digit numbers</li> </ul>	<ul style="list-style-type: none"> <li>Explains what division is</li> <li>Explains the relationship between division and subtraction</li> <li>Explains the inverse relationship between multiplication and division</li> <li>Divides 3 digit by 1 digit numbers with remainders</li> <li>Divides 4 digit numbers with divisors of 10, 100 and 1000 (e.g. <math>2390 \div 10</math> OR <math>2390 \div 100</math>)</li> <li>Memorizes, practices and recalls division facts to 100</li> <li>Uses factors and multiples of numbers up to 100</li> </ul>	<ul style="list-style-type: none"> <li>As below with a high level of accuracy and with any large whole number.                             <ul style="list-style-type: none"> <li>Understands situations that involve multiplication and division</li> </ul> </li> <li>Selects an appropriate method for solving a problem, for example, mental estimation, mental or written strategies or by using a calculator</li> </ul>	<ul style="list-style-type: none"> <li>Memorizes, practices and recalls multiplication facts to 100</li> <li>Multiplies 2 digit by 1 digit numbers (most answers are correct)</li> <li>Explains the strategies used</li> </ul>	<ul style="list-style-type: none"> <li>Memorizes, practices and recalls division facts to 100</li> <li>Divides 2 digit by 1 digit - related to basic facts with/without remainder e.g. <math>36 \div 4 = 9</math> or <math>38 \div 4 = 9 \text{ r } 2</math></li> <li>Divides 4 digit numbers by divisors of 10, 100 and 1000 (e.g. <math>4000 \div 1000 = 4</math> etc)</li> <li>Explains the strategies used</li> </ul>

In a unit the student is advanced:

- Is well in advance of the expected requirements
- Has achieved the requirements and provided outstanding work products and evidence in a variety of ways
- Consistently provides evidence of learning that is high in quality and quantity
- Is confident and articulate about sharing their learning with others
- Demonstrates and applies higher level knowledge, skills and understandings

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<b>3 = Proficient (Phase 2)</b>	<ul style="list-style-type: none"> <li>Explains what multiplication is</li> <li>Make and records repeated groups of the same number</li> <li>Recognises and uses the multiplication symbol</li> <li>Explains the relationship between multiplication and addition</li> <li>Explains the relationship between table facts (e.g. can make a connection between the 5x and the 10x)</li> <li>Recalls tables facts (e.g. 2s, 5s and 10s)</li> <li>Knows the commutative rule of multiplication (e.g. that 5 x 2 is the same as 2 x 5)</li> <li>Multiply 1 digit by 1 digit</li> </ul>	<ul style="list-style-type: none"> <li>Explains what division is</li> <li>Explains the relationship between division and subtraction</li> <li>Explains the inverse relationship between multiplication and division</li> <li>Divides 2 digit numbers with 1 digit numbers (no remainders)</li> <li>Recalls division facts (e.g. 2s, 5s and 10s)</li> </ul> <p>Answers are mostly correct</p>	<ul style="list-style-type: none"> <li>Understands situations that involve multiplication and division</li> <li>Selects an appropriate method for solving a problem, for example, mental estimation, mental or written strategies or by using a calculator</li> </ul> <p>Answers are mostly correct</p>	<ul style="list-style-type: none"> <li>Memorizes, practices and recalls multiplication facts (eg. 2s, 5s, 10s)</li> <li>Multiplies 1 digit by 1 digit numbers</li> <li>Explains strategies used</li> </ul>	<ul style="list-style-type: none"> <li>Memorizes, practices and recalls division facts (eg. 2s, 5s, 10s)</li> <li>Divides 2 digit by 1 digit - related to basic facts without remainder e.g. <math>36 \div 4 = 9</math>)</li> </ul>

**Proficient**

In a unit the student:

- Has achieved the requirements and provided quality work products and evidence in a variety of ways
- Usually provides evidence of learning that is high in quality and quantity
- Is able to discuss their learning in meaningful ways to others
- Demonstrates and applies good knowledge, skills and understandings

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<b>Consolidating</b>	With support.. <ul style="list-style-type: none"> <li>Explains what multiplication is</li> <li>Make and records repeated groups of the same number</li> <li>Recognises and uses the multiplication symbol</li> <li>Explains the relationship between multiplication and addition</li> <li>Explains the relationship between table facts (e.g. can make a connection between the 5x and the 10x)</li> <li>Recalls tables facts (e.g. 2s, 5s and 10s)</li> <li>Knows the commutative rule of multiplication (e.g. that 5 x 2 is the same as 2 x 5)</li> </ul>	With support.. <ul style="list-style-type: none"> <li>Explains what division is</li> <li>Explains the relationship between division and subtraction</li> <li>Explains the inverse relationship between multiplication and division</li> <li>Divides 2 digit numbers with 1 digit numbers (no remainders)</li> <li>Recalls division facts (e.g. 2s, 5s and 10s)</li> </ul>	With support.. <ul style="list-style-type: none"> <li>Understands situations that involve multiplication and division</li> <li>Selects an appropriate method for solving a problem, for example, mental estimation, mental or written strategies or by using a calculator</li> </ul>	<ul style="list-style-type: none"> <li>Recalls multiplication facts (e.g. 2s, 5s and 10s)</li> </ul>	<ul style="list-style-type: none"> <li>Recalls division facts (e.g. 2s, 5s and 10s)</li> </ul>

**Consolidating**

In this unit the student:

- Has met the expected requirements and has provided average quality work products and evidence in a few ways
- Provides evidence of learning that is acceptable in quality and quantity
- Is able to discuss their learning with others
- Demonstrates and applies some knowledge, skills and understandings

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<b>Beginning</b>	<ul style="list-style-type: none"> <li>Recognizes and makes groups that are of the same number</li> <li>Records the grouping informally</li> </ul>	<ul style="list-style-type: none"> <li>Groups and shares collections of objects equally</li> <li>Records the sharing informally</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Recalls some multiplication facts (e.g. 2s, 5s and 10s)</li> </ul>	<ul style="list-style-type: none"> <li>Recalls some division facts (e.g. 2s, 5s and 10s)</li> </ul>

#### **Beginning**

In this unit the student:

- Has partially achieved the requirements and provided few quality work products and evidence in a limited way
- Provides evidence of learning that is limited in quality and quantity
- Is rarely able to discuss their learning in meaningful ways with others
- Has partially grasped the essential aspects and demonstrates limited knowledge, skills and understandings