



**Odd  
Year**

# The Wilkie Way

## Mathematical Number Knowledge & Skills Assessment Screen Three

### Teacher Guide & Answers

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This screening assessment is designed by Charlotte Wilkinson. A private education consultant specialising in the teaching and learning of primary mathematics.

(MOE Accredited ID 654)

The purpose behind the mathematical screening assessment is to find out what your students know to ensure a firm foundation for the building of further mathematical concepts. This screening covers learning statements from year 4 to 6 of the refreshed curriculum. The mathematics screened in this assessment are:

<b>Whole Numbers</b>	Knows value of digit in a columns (including 0). Can write numbers up to millions (including zeros) Can multiply & divide by 10 or 100. Can round numbers to closest 10 or 100.
<b>Add &amp; Subtract</b>	Solves open number sentences understanding the equals sign. Uses number sense for adding & subtracting close to tidy numbers. Uses an efficient method for multi digit calculations including decimals. Can make an estimation.
<b>Multiply &amp; Divide</b>	Solves open number sentences understanding the equals sign. Solves multi-digit by single digit multiplication and division. Solves multi-digit by multi-digit multiplication.
<b>Fractions</b>	Knows fractions of a region and a number. Understands fractions as numbers and can compare & order fractions including simple equivalents and improper fractions. Understanding the connection between fractions, multiplication & division.
<b>Decimals &amp; Percents</b>	Knows value of digit in up to 3 decimal places. Can sequence decimals. Knows tenths and hundredths in decimal numbers. Knows common fraction, decimal, percentage conversions.

This assessment screen can be used to identify groups of students with common weaknesses to create targeted intervention groups.

	<b>Mid Level 2</b>	<b>Upper Level 2</b>	<b>Early Level 3</b>	<b>Mid Level 3</b>	<b>Upper Level 3</b>	<b>Early Level 4</b>
<b>Overall Score</b>	0 - 12	13 - 32	33 - 55	56 - 80	81 - 93	94 - 100
<b>Whole Number</b>	0 - 3	4 - 7	8 - 11	12 - 16	17 - 19	20
<b>Add/Sub</b>	0 - 6	7 - 8	9 - 11	12 - 16	17 - 19	20
<b>Mult/Div</b>	0 - 4	4 - 7	8 - 11	12 - 16	17 - 19	20
<b>Fractions</b>	0 - 4	5 - 7	8 - 11	12 - 16	17 - 19	20
<b>Decimals</b>	0	1 - 3	4 - 8	9 - 14	15 - 17	18 - 20

	<b>Begin Year 5</b>	<b>End Year 5/Begin Year 6</b>	<b>End Year 6</b>
<b>Overall Score</b>	20 - 40	40 - 65	70 - 100
<b>Whole Number</b>	4 - 8	9 - 14	15 - 20
<b>Add/Sub</b>	4 - 8	9 - 14	15 - 20
<b>Mult/Div</b>	4 - 8	9 - 14	15 - 20
<b>Fractions</b>	4 - 7	8 - 14	15 - 20
<b>Decimals</b>	2 - 4	5 - 10	11 - 20

Students scoring less than 20% rescreen on Screen 2. Students scoring 90 - 100% at the beginning of a year rescreen on Screen 4

## What do you know about whole numbers?

1. Write the value of the underlined digit in each of these numbers in words.

- a. 6480 **4 hundred s**    b. 354 796 **3 hundred thousand**  
 c. 218 276 **10 thousand**

2. Write the following numbers.

- a. twenty thousand three hundred and forty six    **20 346**  
 b. six hundred and thirty two thousand and twenty three    **632 023**  
 c. two million, sixty eight thousand and fourteen    **2 068 014**

3. Multiply these numbers by 100

- a. 358    **35800**    b. 2459    **245 900**    c. 41 035    **4 103 500**

4. Divide these numbers by 100

- a. 3490    **34.9**    b. 2345    **23.45**    c. 63 064    **630.64**

5. Round these numbers to the closest hundred

- a. 378    **400**    b. 84 13    **84 000**    c. 25 453    **25 500**    d. 623 567    **623 600**

6. Round these numbers to the closest ten (decade)

- a. 548    **550**    b. 7204    **7270**    c. 35 524    **35520**    d. 135 565    **135 570**

### Maximum Score 20

<b>Q1</b>	3	Student knows column names and values of whole numbers up to 6 digits.
<b>Q2</b>	3	Student is able to read and write larger numbers and use of zero as a place holder.
<b>Q3&amp;4</b>	6	Student understands the multiplicative structure of the number system is based on multiplying and dividing by powers of 10
<b>Q5&amp;6</b>	8	Student is able to round multi-digit numbers to the closest hundred and to the closest decade, knowing the convention of rounding up when the digit is a five.

Understanding the multiplicative structure of the number system and the x10 factor between columns allows students to multiply and divide numbers of any size using place value and the basic multiplication facts. It allows students to work flexibly with numbers in their canonical and non canonical forms (renamed). Understanding the x10 factor between columns allows for the rewriting of larger numbers in standard form (using exponents) which makes working with larger numbers feasible. Students must also see numbers in their sequential position. Rounding numbers is required for estimation and the degree of rounding depends on the approximation required. Understanding all aspects of place value are required for the development of number sense and the ability to work flexibly with numbers.

<b>Resources for Teaching and Learning</b>			
		<b>Maths Aotearoa</b>	<b>Wilkie Way Resources</b>
<b>Q1</b>	Knows column names and values of whole numbers up to 6 digits.	<b>Book 3A</b> Chapter 6 <b>Book 3B</b> Chapter 3  <b>Pearson Maths</b> <b>Book 3A</b> Chapter 3 <b>Book 3B</b> Chapter 1	<b>Teacher Handbook</b> Number & The Number System  <b>Maths Aotearoa Practice Workbooks</b>
<b>Q2</b>	Can read and write larger numbers and use zero as a place holder.	<b>Book 3A</b> Chapter 6 <b>Book 3B</b> Chapter 3  <b>Pearson Maths</b> <b>Book 3A</b> Chapter 3 <b>Book 3B</b> Chapter 1	<b>Book2B</b> 21. Estimating & Rounding  <b>Book 3A</b> 3. Larger Numbers
<b>Q3</b> <b>Q4</b>	Understands the multiplicative structure of the number system is based on multiplying and dividing by powers of 10	<b>Book 3B</b> Chapters 3, 4 <b>Book 4A</b> Chapter 7  <b>Pearson Maths</b> <b>Book 3B</b> Chapter 1, 2	<b>Book 3B</b> 10. Whole Number Place Value
<b>Q5</b> <b>Q6</b>	Can round multi-digit numbers to the closest hundred and to the closest decade, knowing the convention of rounding up when the digit is a five.	<b>Book 3A</b> Chapters 4, 5, 6  <b>Pearson Maths</b> <b>Book 3A</b> Chapter 3	

**Teacher Handbooks & Dice & Counter Games** are available from the online store [www.wilkieway.co.nz](http://www.wilkieway.co.nz)

**Maths Aotearoa Practice Workbooks** are available along with further resources in the members area of [www.wilkieway.co.nz](http://www.wilkieway.co.nz) (subscription)

### **Student Resources - Numbers & The Number System Phase Two**

Place Value Activities  
Place Value Games  
Place Value Problems

### **Teacher Professional Learning**

Place Value Progressions  
Power Point: Place Value, The Heart of the Number System

**Maths Aotearoa is available from [www.edify.co.nz](http://www.edify.co.nz)**

**What do you know about addition and subtraction?  
Complete the following equations.**

- 1a.  $26 + 7 = 33$                       d.  $62 - 7 = 55$   
 b.  $68 + 6 = 74$                         e.  $53 - 5 = 48$   
 c.  $35 + 8 = 43$                         f.  $34 - 7 = 27$

**Solve these equations mentally.** (No marks if any recording other than the answer made).

- 2a.  $264 + 29 = 293$                       b.  $2155 + 199 = 2354$   
 3a.  $175 - 19 = 156$                         b.  $1547 - 299 = 1248$

**Re write the following equations vertically and solve:**

*Look for common misconceptions - columns mis-aligned, treating subtraction as commutative*

- 4a.  $256 + 74 = 330$                         b.  $4268 + 657 = 4925$   
 5a.  $342 - 27 = 315$                         b.  $23\ 652 - 4087 = 20\ 665$   
 6a.  $24.5 + 56.2 = 80.7$                       b.  $346.56 + 45.74 = 392.3$   
 7a.  $73.8 - 45.3 = 28.5$                       b.  $537.8 - 43.55 = 494.25$

**Estimate the answers to the closest hundred.**

- 8a.  $584 + 237 = 800$                         b.  $4724 - 2278 = 2400$

Maximun Score 20		
Q1	6	Students solve open number sentences with an understanding of the equals sign. Understands the inverse relationship between addition and subtraction.
Q2&3	4	Student uses an efficient mental additive strategy (number sense) to add and subtract a tidy number.
Q4	2	Student uses a standard algorithm efficiently for addition with whole numbers
Q5	2	Student uses a standard algorithm efficiently for subtraction with whole numbers
Q6	2	Student uses a standard algorithm efficiently for addition with decimal numbers
Q7	2	Student uses a standard algorithm efficiently for subtraction with decimal numbers
Q8	2	Student is able to estimate three and four digit addition & subtraction to closest 100.
<p>Students should be able to recall basic addition and subtraction facts and show an understanding of inverse relationships. Students should be able to work mentally with whole numbers where one of the numbers is close to a tens number (rounding &amp; compensating). When adding and subtracting students should be able to use a standard algorithm reliably and efficiently. Students should understand what is meant by estimation and use their rounding knowledge to make an estimation for addition and subtraction. This skill is essential when using a calculator to make calculations.</p>		

<b>Resources for Teaching and Learning</b>		
	<b>Maths Aotearoa</b>	<b>Wilkie Way Resources</b>
<b>Q1 Q2</b>	Can recall basic addition & subtraction facts including using to add a single digit to a double digit. Can use signs & symbols in a linear equation.	<b>Book 2A</b> Chapter 11,15, 16 <b>Book 2B</b> Chapter 1 <b>Book 3A</b> Chapter 4 <b>Pearson Maths</b> <b>Book 2A</b> Chapters 11,15 & 16 <b>Book 2A</b> Chapter 1 <b>Book 3A</b> Chapter 1
<b>Q3</b>	Can use an efficient mental strategies for addition and subtraction.	<b>Book 2B</b> Chapter 2, 3,10,11 <b>Book 3B</b> Chapter 4 & 5 <b>Pearson Maths</b> <b>Book 2B</b> Chapter 2, 3 <b>Book 3A</b> Chapter 1, 2
<b>Q4</b>	Can use a standard algorithm efficiently for addition with whole numbers	<b>Book 2B</b> Chapter 2,10 <b>Book 3A</b> Chapters 4 <b>Book 3B</b> Chapter 5 <b>Pearson Maths</b> <b>Book 3A</b> Chapter 1, 15 <b>Book 3B</b> Chapter 3
<b>Q5</b>	Can use a standard algorithm efficiently for subtraction with whole numbers	<b>Book 2B</b> Chapter 3,11 <b>Book 3A</b> Chapters 5 <b>Book 3B</b> Chapter 5,11, 12 <b>Pearson Maths</b> <b>Book 3A</b> Chapter 2, 15 <b>Book 3B</b> Chapter 3
<b>Q6</b>	Can use a standard algorithm efficiently for addition with decimal numbers	<b>Book 3B</b> Chapter 11, 12
<b>Q7</b>	Can use a standard algorithm efficiently for subtraction with decimal numbers	<b>Book 3B</b> Chapter 11, 12
<b>Q8</b>	Can estimate an answer to an addition or subtraction.	<b>Book 2B</b> Chapter 9 <b>Book 3A</b> Chapters 4 & 5 <b>Book 3B</b> Chapter 5

**Teacher Handbooks**  
Arithmetic Operations  
Numbers & The Number System

**Dice & Counter Games:**  
Set 9  
Addition & Subtraction to 20

**Maths Aotearoa Practice Workbooks**

**Book 2B**  
21. Rounding & Estimating  
22. Adding 3 digit numbers  
23. Subtracting 3 digit numbers

**Book 3A**  
2. Addition & Subtraction  
8. The Four Operations

**Book 3B**  
11. Addition & Subtraction  
15. Decimals Fractions

**Teacher Handbooks & Dice & Counter Games** are available from the online store [www.wilkieway.co.nz](http://www.wilkieway.co.nz)

**Maths Aotearoa Practice Workbooks** are available along with further resources in the members area of [www.wilkieway.co.nz](http://www.wilkieway.co.nz) (subscription)

### **Student Resources - Addition & Subtraction Phase Two**

Addition & Subtraction Problems  
Addition & Subtraction Games

### **Teacher Professional Learning**

Addition & Subtraction Progressions & Learning Outcomes  
Power Point: Teaching & Learning Basic Facts

**Maths Aotearoa is available from [www.edify.co.nz](http://www.edify.co.nz)**

## What do you know about multiplication and division?

Complete the following equations.

1a.  $3 \times 6 = 18$

b.  $4 \times 8 = 32$

c.  $7 \times 5 = 35$

d.  $6 \times 7 = 42$

e.  $9 \times 6 = 54$

f.  $8 \times 8 = 64$

2a.  $24 \div 4 = 6$

b.  $36 \div 4 = 9$

c.  $24 \div 3 = 8$

d.  $48 \div 6 = 8$

e.  $56 \div 7 = 8$

f.  $36 \div 6 = 6$

Solve the following equations and show how you arrived at your answer.

Students may use a standard algorithm or a cross product and a standard algorithm.

3a.  $14 \times 4 = 56$

b.  $24 \times 5 = 120$

4a.  $37 \times 26 = 962$

b.  $25 \times 18 = 3888$

Student may re-write the divisions and solve using a short or long division method

5a.  $72 \div 4 = 18$

b.  $86 \div 6 = 14 \text{ r } 2$

6a.  $258 \div 4 = 64 \text{ r } 2$

b.  $642 \div 7 = 91 \text{ r } 5$

64.5

64½

Maximum Score 20		
Q1	6	Student recalls basic multiplication facts solving open number sentences, understanding the equals sign.
Q2	6	Student understands division as the inverse of multiplication and solves open number sentences understanding the equals sign.
Q3&4	4	Student uses an efficient strategy, a standard algorithm or a cross product strategy to multiply whole numbers.
Q5&6	4	Student uses an efficient strategy or a standard algorithm to divide a multi digit number by a single digit including remainders.
The recall of multiplication facts will affect the range of multiplicative strategies students are able to make use of. Multiplicative strategies require students to understand and use the distributive and associative properties of multiplication including doubling and halving. Irrespective of the size of the number the same strategies are applied and rely on place value knowledge and recall of facts. Limited recall of multiplication facts may limit students to using repeated doubling as a favoured strategy. Rote recall of facts will not necessarily lead to development of multiplicative thinking.		

<b>Resources for Teaching and Learning</b>			
		<b>Maths Aotearoa</b>	<b>Wilkie Way Resources</b>
<b>Q1</b>	Can recall basic multiplication facts solving open number sentences, understanding the equals sign.	<b>Book 2B</b> Chapter 15 <b>Book 3A</b> Chapters 1 - 3 <b>Book 3B</b> Chapter 1  <b>Pearson Maths</b> <b>Book 3A</b> Chapter 4, 5, 6, 15 <b>Book 3B</b> Chapter 4	<b>Teacher Handbooks</b> Arithmetic Operations Numbers & The Number System  <b>Dice &amp; Counter Games</b> Set 10 Multiplication Practice x 6,7,8,9 Set 11 Division Practice ÷ 6,7,8,9 Set 13 Multiplication Practice Set 14 Division Practice
<b>Q2</b>	Can understand division as the inverse of multiplication and solves open number sentences understanding the equals sign.	<b>Book 2B</b> Chapter 15 <b>Book 3A</b> Chapter 7 <b>Book 3B</b> Chapter 7  <b>Pearson Maths</b> <b>Book 3A</b> Chapter 7, 15 <b>Book 3B</b> Chapter 8	<b>Maths Aotearoa Practice Workbooks</b>
<b>Q3</b> <b>Q4</b>	Can use an efficient strategy, a standard algorithm or a cross product array to multiply whole numbers.	<b>Book 3A</b> Chapter 7 <b>Book 3B</b> Chapters 1, 2, 6 <b>Book 4A</b> Chapter 2  <b>Pearson Maths</b> <b>Book 3B</b> Chapter 4, 5, 6, 8 <b>Book 4A</b> Chapter 2	<b>Book 2B</b> 18. Working with 3 and 9 times tables 19. Doubling x2 x4 x8 20. Equal Grouping, equal Sharing 25. Understanding Division Multiples & Factors
<b>Q5</b> <b>Q6</b>	Student uses an efficient strategy or a standard algorithm to divide a multi digit number by a single digit including remainders.	<b>Book 3A</b> Chapter 7 <b>Book 3B</b> Chapters 7, 8, 9  <b>Pearson Maths</b> <b>Book 3B</b> Chapter 7, 8, 9	<b>Book 3A</b> 1. Multiply by 6, 7, & 8 4. Multiplication & Division 8. The Four Operations  <b>Book 3B</b> 9. Practicing Multiplication 10. Extending Multiplication 11. Extending Division, Multiples & Factors

**Teacher Handbooks & Dice & Counter Games** are available from the online store [www.wilkieWAY.co.nz](http://www.wilkieWAY.co.nz)

**Maths Aotearoa Practice Workbooks** are available along with further resources in the members area of [www.wilkieWAY.co.nz](http://www.wilkieWAY.co.nz) (subscription)

### **Student Resources - Multiplication & Division Phase Two**

Multiplication & Division Problems  
Multiplication & Division Games  
Maths Gym - Teaching & Learning Multiplication Tables

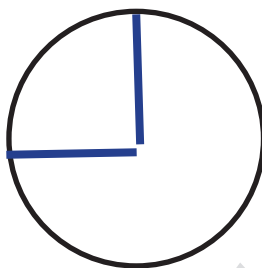
### **Teacher Professional Learning**

Multiplication & Division Progressions & Learning Outcomes  
Power Point: Teaching & Learning Basic Facts

## What do you know about fractions?

Show the given fraction by colouring the fraction of the shape or set.

1a. Colour  $\frac{1}{4}$  of the circle



1b. Colour  $\frac{3}{8}$  of the rectangle



2a. Colour  $\frac{1}{3}$  of the counters

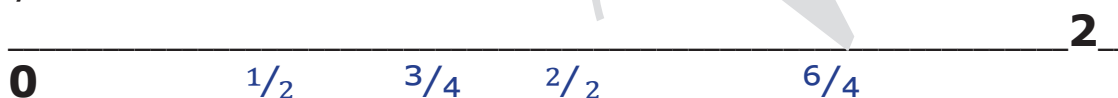


2b. Colour  $\frac{2}{5}$  of the counters



Write these fractions where they belong on the number line

3a.  $\frac{2}{2}$     b.  $\frac{1}{2}$     c.  $\frac{6}{4}$     d.  $\frac{3}{4}$



4a.  $\frac{1}{3}$     b.  $\frac{6}{5}$     c.  $\frac{12}{8}$     d.  $\frac{8}{4}$



Choose the fraction from the table equivalent to the fraction given.

5a.  $\frac{3}{4}$      $\frac{6}{8}$                       b.  $2\frac{1}{2}$      $\frac{15}{6}$                       c.  $1\frac{1}{4}$      $\frac{15}{12}$                       d.  $\frac{4}{5}$      $\frac{8}{10}$

Answer the following questions.

6a. What is  $\frac{1}{6}$  of 42?    **7**                      b. What is  $\frac{3}{4}$  of 32    **24**  
 c. What is  $\frac{2}{9}$  of 45?    **10**                      d. What is  $\frac{4}{7}$  of 56    **32**

### Maximum Score 20

<b>Q1</b>	2	Student represents a unit fraction & non unit fraction of a region (continuous representation).
<b>Q2</b>	2	Student represents a unit fraction & non unit fraction of a set of objects (discrete representation).
<b>Q3</b>	4	Student is able to order halves and quarters on a number line.
<b>Q4</b>	4	Student is able to order proper and improper fractions on a numberline using knowledge of equivalence.
<b>Q5</b>	4	Student is able to use mixed numbers, equivalent fractions and improper fractions.
<b>Q6</b>	4	Student is able to use multiplication & division to find a fraction of a number.

Students understanding of fractions should have developed into an understanding of the numerator and denominator functions in a written fraction in both a continuous and discrete representation. Students should understand fractions as number existing between the whole numbers. Understanding rational numbers means students understand there are an infinite number of numbers between numbers and every number has multiple names. Students need to see and use the relationship between multiplication, division and fractions in order to develop proportional reasoning. Students need to be able to use their multiplication facts to make proportional adjustments to make equivalent fractions, create improper fractions from mixed numbers and the inverse.



<b>Resources for Teaching and Learning</b>			
		<b>Maths Aotearoa</b>	<b>Wilkie Way Resources</b>
<b>Q1</b>	Can represent a unit fraction & non unit fraction of a region (continuous representation).	<b>Book 2B</b> Chapter 12 <b>Book 3A</b> Chapter 8  <b>Pearson Maths</b> <b>Book 2B</b> Chapter 12 <b>Book 3A</b> Chapter 8	<b>Teacher Handbooks</b> Fractions Decimals & Percentages  <b>Dice &amp; Counter Games:</b> Set 6 Beginning Fractions Set 12 Fractions Set 15 Fractions, Decimals & Percentages
<b>Q2</b>	Can represent a unit fraction & non unit fraction of a set of objects (discrete representation).	<b>Book 2B</b> Chapter 13 <b>Book 3A</b> Chapter 8 <b>Book 3B</b> Chapter 7  <b>Pearson Maths</b> <b>Book 2B</b> Chapter 12 <b>Book 3A</b> Chapter 8 <b>Book 3b</b> Chapter 7	<b>Maths Aotearoa Practice Workbooks</b>
<b>Q3</b>	Can order halves and quarters on a number line	<b>Book 2B</b> Chapter 12 <b>Book 3A</b> Chapter 8  <b>Pearson Maths</b> <b>Book 2B</b> Chapter 12 <b>Book 3B</b> Chapter 9	<b>Book 2B</b> 24. Understanding Fractions  <b>Book 3a</b> 5. Fractions
<b>Q4</b>	Can to order proper and improper fractions on a numberline using knowledge of equivalence.	<b>Book 3A</b> Chapter 8 <b>Book 3B</b> Chapter 9  <b>Pearson Maths</b> <b>Book 3B</b> Chapter 9	<b>Book 3B</b> 14. Fractions
<b>Q5</b>	Can use mixed numbers, equivalent fractions and improper fractions.	<b>Book 3B</b> Chapter 9  <b>Pearson Maths</b> <b>Book 3B</b> Chapter 9	
<b>Q6</b>	Can use multiplication & division to find a fraction of a number.	<b>Book 3A</b> Chapter 8 <b>Book 3B</b> Chapter 9  <b>Pearson Maths</b> <b>Book 3B</b> Chapter 9	

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### **Student Resources - Fractions Decimals and % Phase Two**

Fraction Cards  
Fraction Posters - Understanding Fractions  
Fraction Problems

### **Teacher Professional Learning**

Fractions Progressions  
Fractions Learning Outcomes (included in Multiplication & Division)  
Power Point: Fractions & The Learning Progressions

**Maths Aotearoa is available from [www.edify.co.nz](http://www.edify.co.nz)**

## What do you know about decimals and percentages?

1. Write the value of the underlined digit in each of these numbers in words.

a. 2.3 **3 tenths**      b. 3.8**6** **8 tenths**

c. 25.78 **8 hundredths**      d. 2.236 **6 thousandths**

2. Write these numbers in sequence from smallest to largest

a. 0.3    0.26    0.6    0.07    0.45  
**0.07    0.26    0.3    0.45    0.6**

b. 0.65       $\frac{7}{10}$     35%     $\frac{16}{100}$     0.4  
 **$\frac{16}{100}$     35%    0.4      0.65       $\frac{7}{10}$**

3. Round these numbers to the nearest whole number.

a. 4.2 **4**      b. 6.43 **6**      c. 8.78 **9**

4. Round these numbers to one decimal place.

a. 0.35 **0.4**      b. 1.56 **1.6**      c. 3.62 **3.6**

5. Write these fractions as decimal numbers.

a.  $\frac{1}{2}$  **0.5**      b.  $\frac{1}{4}$  **0.25**      c.  $\frac{1}{5}$  **0.2**      d.  $\frac{15}{10}$  **1.5**

6. Write these fractions as a percentage.

a.  $\frac{1}{2}$  **50%**      b.  $\frac{3}{4}$  **75%**      c.  $\frac{3}{10}$  **30%**      d.  $\frac{8}{20}$  **40%**

Maximum Score 20		
Q1	4	Student is able to name decimal columns up to 3 decimal places.
Q2	2	Student is able to order decimals (2 decimal places), fractions and percentages.
Q3&4	6	Student is able to round decimal numbers to whole numbers and one decimal place.
Q5	4	Student is able to convert common fractions to decimals.
Q6	4	Student is able convert fractions to simple percentages.

Naming the columns is a linguistic understanding which is a foundation requirement requiring an understanding of fraction names. When ordering decimals students require an understanding of the fractional equivalence of the place value. The most common mistake is the use of whole number thinking where the number of digits makes a number bigger. Students should know the relationship between a fraction, a decimal and a percentage. Decimals are equivalent fractions based on groups of ten and contribute to a student's developing understanding of rational numbers. Common conversions between fractions, decimals and percentages shows knowledge but not necessarily understanding.

<b>Resources for Teaching and Learning</b>			
		<b>Maths Aotearoa</b>	<b>Wilkie Way Resources</b>
<b>Q1</b>	Can name decimal columns up to 3 decimal places.	<b>Book 3A</b> Chapter 9 <b>Book 3B</b> Chapter 10 & 11  <b>Pearson Maths</b> <b>Book 3A</b> Chapters 10, 11 <b>Book 3B</b> Chapter 10, 11, 13, 14	<b>Teacher Handbooks</b> Numbers & The Number System. Fractions Decimals & Percentages  <b>Dice &amp; Counter Games:</b> Set 15 Fractions, Decimals & Percentages  <b>Maths Aotearoa Practice Workbooks:</b>  <b>Level 3A</b> 6. Decimals - tenths  <b>Level 3B</b> 15. Decimal Fractions
<b>Q2</b>	Can order decimal numbers up to 3 place decimals.	<b>Book 3A</b> Chapter 10 <b>Book 3B</b> Chapter 10, 11  <b>Pearson Maths</b> <b>Book 3A</b> Chapters 10 <b>Book 3B</b> Chapter 10, 11, 13	
<b>Q3</b> <b>Q4</b>	Can round decimal numbers to whole numbers and one decimal place.	<b>Book 3A</b> Chapter 11 <b>Book 3B</b> Chapter 11  <b>Pearson Maths</b> <b>Book 3A</b> Chapter 9 <b>Book 3B</b> Chapter 23 & 24	
<b>Q5</b>	Can convert common fractions to decimals.	<b>Book 3A</b> Chapter 9, 10 <b>Book 3B</b> Chapter 10, 11  <b>Pearson Maths</b> <b>Book 3A</b> Chapter 9 <b>Book 3B</b> Chapter 10, 11,13	
<b>Q6</b>	Can convert fractions to simple percentages.	<b>Book 3B</b> Chapter 13  <b>Pearson Maths</b> <b>Book 3B</b> Chapter 12	

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**Maths Aotearoa Practice Workbooks** are available along with further resources in the members area of [www.wilkieway.co.nz](http://www.wilkieway.co.nz) (subscription)

### **Student Resources**

Fraction Cards  
Decimats  
Fraction Posters - Understanding Fractions  
Fraction, Decimals & Percentage Problems

### **Teacher Professional Learning**

Fractions Progressions & Learning Outcomes (included in Multiplication & Division)  
Place Value Progressions  
Power Point: Fractions & The Learning Progressions

**Maths Aotearoa is available from [www.edify.co.nz](http://www.edify.co.nz)**

## **Administering the screening assessment.**

This assessment is not timed. Expect students to take around 30 - 60 minutes to complete. Sections can be completed at different times rather than taking the whole assessment screen in one go. Use in term 1 and repeat in term 4 (use same booklet and a different colour pen), to show knowledge built over the year.

This screen covers the expectations of students working in year 5 and 6 of the refreshed curriculum. Progress in building the knowledge and skills for continued progress in year 7 can be assessed using this screen.

An expected score for beginning and end of year 5 and 6 is shown on the front of this teacher guide.

Curriculum levels are currently shown to allow for continuity in data comparison as schools transition to year comparisons rather than level comparisons.

Students with a specific reading difficulty may have a reader to ensure they understand the question. Students with a specific writing difficulty may have a writer. A writer records exactly what a student says.

Each page of the assessment screens for a particular area of mathematical knowledge. Each page has a score of 20 marks (one mark per correct answer). The even weighting between sections reflects the need for students to be making progress in all aspects to provide a broad foundation for further learning.

Within each page, the questions target smaller items of knowledge or skills within the particular area of mathematical knowledge. Information on each set of questions is given at the end of each section in this teacher guide. If students make consistent errors then this particular area of knowledge is weak or has not yet been met in the classroom programme and will require specific targeted teaching and learning experiences.

Maths Aotearoa and Wilkie Way resources have been identified for further teaching and learning experiences. A single chapter often covers multiple areas as areas should not be taught in isolation but as connected knowledge. (Pearson Maths links have been included but this series of books have been replaced with a third edition known as Maths Aotearoa) Book Chapters are referenced to MOE 'Figure it Out' books in the Pearson Mathematics and Maths Aotearoa Teacher Guides.

Throughout the series use of the number knowledge will be found in chapters in measurement, algebra, geometry and statistics.

To find out more information on the use of knowledge and skills to solve problems use the Primary Maths Assessment Tool (PMAT) published by Edify (ISBN 978094749562). It would be expected that students working within year 5 and 6 knowledge would be assessed using Section 5 of this problem solving assessment tool.

Students working at the lower end of the knowledge may find section 4 more appropriate.

These assessments are primarily for use in identifying next teaching and learning steps and do not necessarily need to be matched to curriculum levels except if used for reporting purposes.

Maths Aotearoa and PMAT are available from [www.edify.co.nz](http://www.edify.co.nz)