

MULTI
MATHS

The title 'MULTI MATHS' is rendered in large, bold, 3D block letters. Several cartoon children are interacting with the letters: a boy sits on the 'M', a girl stands on the 'S', and others are positioned around the 'U', 'L', 'T', and 'I'.

Workbook

4



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Preface




Ultimaths - Workbook 4

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ULTI MATHS is a mathematics learning series for primary school students. The contents are systematically arranged according to the ability of the child, which can be applied in everyday life, and can be used as preparation for the next level.



ULTI MATHS uses an international standard of mathematical teaching and learning approaches, which have been proven to bring children success in learning mathematics. The Concrete-Pictorial-Abstract approach introduces new concepts with the use of appropriate manipulatives, before moving to pictorials and abstract representations. The development of topics across the levels in spiral progression approach helps learners acquire a new concept by building on previously learned concepts. The focus on Problem Solving by promoting the use of bar models, empowers students to develop visualization skills to better understand word problems before solving them.



ULTI MATHS provides active, fun, and collaborative mathematics learning with lots of activities and games. These learning experiences will enable students to acquire and apply concepts and skills, develop critical thinking skills, and positive attitudes towards mathematics.

Using This Book

Ultimaths has some special features to help students learn and use this book.

Exercise

Independent exercises to strengthen and consolidate the concepts learned in Textbook.



What Do You Remember?

This feature is for reflection of what have been learnt.



Something More Exciting!

More challenging practice to stimulate higher order thinking.



Contents

Unit 1	Whole Numbers (1) – Numbers to 100 000	
	Exercise 1 Counting To 100 000	2
	Exercise 2 Place Value	4
	Exercise 3 Comparing Numbers Within 100 000	7
	Exercise 4 Rounding Numbers To The Nearest Ten	14
	Exercise 5 Rounding Numbers To The Nearest Hundred	17
	Exercise 6 Estimation	20
	Something More Exciting	23
	What Do You Remember?	23
Unit 2	Whole Numbers (2) – Multiplication and Division within 100 000	
	Exercise 1 Multiplication By A 1-Digit Number	24
	Exercise 2 Multiplication By A 2-Digit Number	28
	Exercise 3 Division By A 1-Digit Number	35
	Exercise 4 Word Problems	41
	Something More Exciting	46
	What Do You Remember?	46
Unit 3	Factors And Multiples	
	Exercise 1 Factors	47
	Exercise 2 Multiples	52
	Exercise 3 Prime Numbers	56
	Exercise 4 Finding The Highest Common Factors (HCF) By Prime Factorisation	59
	Exercise 5 Finding The Lowest Common Multiple (LCM) By Prime Factorisation	64
	Something More Exciting	66
	What Do You Remember?	66
Unit 4	Fractions (1)	
	Exercise 1 Numerator And Denominator	67
	Exercise 2 Understanding Equivalent Fractions	70
	Exercise 3 More Equivalent Fractions: Short Cut	72
	Exercise 4 Comparing And Ordering Fractions	75
	Something More Exciting	79
	What Do You Remember?	79

Unit 5	Fractions (2)	
	Exercise 1 Mixed Numbers	80
	Exercise 2 Improper Fractions	84
	Exercise 3 Conversion Of Fractions	88
	Exercise 4 Fraction Of A Set	93
	Exercise 5 Word Problems	98
	Exercise 6 Rounding And Estimation Of Fractions	101
	Something More Exciting	104
	What Do You Remember?	104

Unit 6	Decimals	
	Exercise 1 Understanding Tenths	105
	Exercise 2 Understanding Hundredths	112
	Exercise 3 Understanding Thousandths	120
	Exercise 4 Comparing Decimals	128
	Exercise 5 Fractions And Decimals	132
	Exercise 6 Rounding Decimals	133
	Exercise 7 Rounding The Measurements Of Length And Mass	139
	Exercise 8 Estimation Of Decimals	141
	Something More Exciting	143
	What Do You Remember?	143

Unit 7	Percentage	
	Exercise 1 Per Cent	144
	Something More Exciting	148
	What Do You Remember?	148

Unit 8	Angles	
	Exercise 1 Naming Angles	149
	Exercise 2 Measuring Angles	152
	Exercise 3 Drawing Angles To 180°	157
	Exercise 4 8-Point Compass	160
	Something More Exciting	164
	What Do You Remember?	164

Unit 9	Lines And Angles	
	Exercise 1 Perpendicular Lines	165
	Exercise 2 Parallel Lines	169
	Exercise 3 Angles On A Straight Line	173

	Exercise 4 Angles At A Point	177
	Exercise 5 Vertically Opposite Angles	181
	Something More Exciting	184
	What Do You Remember?	184

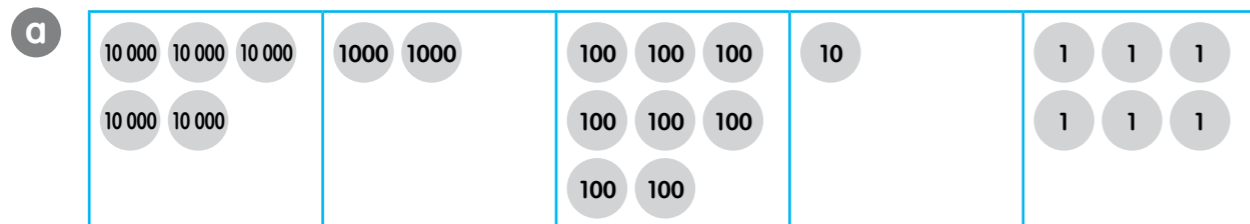
Unit 10	Polygons	
	Exercise 1 Naming Angles	186
	Exercise 2A Angle Of A Triangle	188
	Exercise 2B Right-Angled Triangles	191
	Exercise 2C Isosceles Triangles	194
	Exercise 2D Equilateral Triangles	197
	Exercise 3A Properties Of Quadrilaterals: Squares, Rectangles And Parallelograms	199
	Exercise 3B Properties Of Quadrilaterals: Rhombuses	203
	Exercise 3C Properties Of Quadrilaterals: Trapeziums	205
	Something More Exciting	207
	What Do You Remember?	207

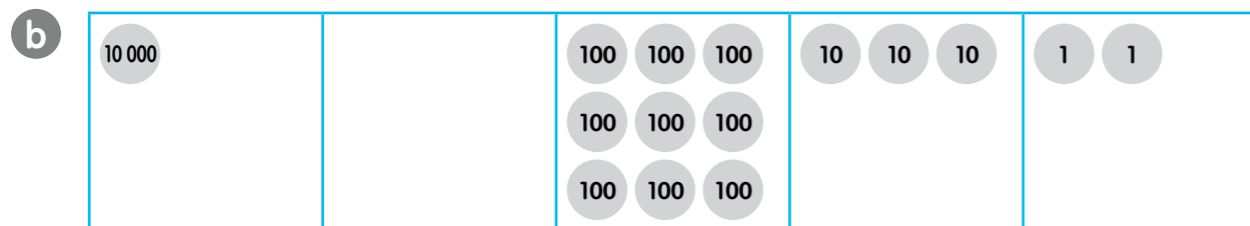
Unit 11	Area And Perimeter	
	Exercise 1 Square Centimetre (cm^2)	208
	Exercise 2 Square Metre (m^2)	211
	Exercise 3 Area Of A Rectangle And A Square	214
	Exercise 4 Perimeter And Area	221
	Exercise 5 More Area Of A Rectangle And A Square	224
	Exercise 6 More Perimeter Of A Rectangle And A Square	228
	Exercise 7 Base And Height Of A Triangle	232
	Exercise 8 Finding The Area Of A Triangle	235
	Exercise 9 Composite Figures	238
	Exercise 10 Word Problems	241
	Something More Exciting	246
	What Do You Remember?	246

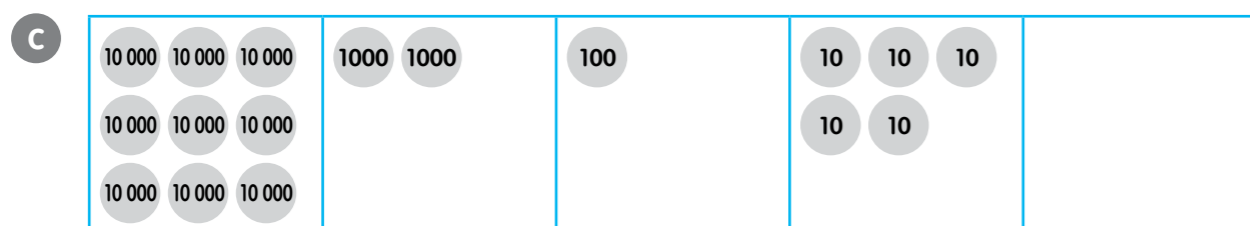
Unit 12	Bar Graphs	
	Exercise 1 Making Bar Graphs With Scales	247
	Exercise 2 Reading And Interpreting Bar Graphs	252
	Something More Exciting	256
	What Do You Remember?	256

Exercise 1 Counting To 100 000

1 Count and write each number in numerals.









2 Write each number in words.

a 32 567

b 80 623

c 41 300

d 66 099

3 Write each number in numerals.

a Seventy thousand, one hundred and sixty-two

b Fifty-four thousand, eight hundred and seven

c Thirty-seven thousand and two hundred

d Thirteen thousand and twelve

Exercise 2 Place Value

1 Fill in the missing parts.

a

10 000 10 000	1000 1000 1000 1000 1000 1000 1000 1000 1000	100 100 100 100	10 10 10 10 10 10 10	1 1 1
---------------	--	--------------------	----------------------------	-------

Ten thousands	Thousands	Hundreds	Tens	Ones
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

b The digit 2 is in the place.

The digit 9 is in the place.

The digit 4 is in the place.

The digit 7 is in the place.

The digit 3 is in the place.

c The value of the digit 2 is .

The value of the digit 9 is .

The value of the digit 4 is .

The value of the digit 7 is .

The value of the digit 3 is .

2 Fill in the missing parts and write in numbers.

a

	10 000 10 000	1000 1000 1000 1000 1000 1000			1 1 1
Place			4	0	
Value			400		
Write	<input type="text"/>				

b

	10 000 10 000 10 000 10 000 10 000 10 000	1000 1000	100 100 100	10 10	1 1 1 1 1 1 1 1
Place					
Value					
Write	<input type="text"/>				

3 Fill in the missing parts.

a

	10 000 10 000 10 000 10 000 10 000 10 000 10 000		100 100 100 100 100 100	10	1 1 1 1 1 1 1 1
--	--	--	----------------------------	----	-----------------------

<input type="text"/>	Thousands	Hundreds	Tens	Ones
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	8

b The digit 7 is in the place and has a value of .

The digit is in the thousands place and has a value of .

The digit is in the tens place.

The digit 8 is in the place and has a value of .

4 Put the number 31 920 into the place value table given.

Ten thousands	Thousands	Hundreds	Tens	Ones
□	□	□	□	□

b The digit □ is in the thousands place.

c The digit 3 has a value of □.

d The digit □ has a value of 900.

5 Fill in each box with the correct number.

a $97\ 016 = 90\ 000 + \square + 10 + 6$

b $50\ 020 = \square + 20$

c $20\ 483 = 20\ 000 + 400 + \square + \square$

d $68\ 007 = \square + 8000 + 7$

6 What is the value of the digit 8 in each of the following numbers?

a 52 **8**70 □

b **18** 521 □

c 40 **684** □

d **84** 962 □

Exercise 3 Comparing Numbers Within 100 000

Compare numbers using 10 000 1000 100 10 1

1 Which is greater, 22 569 or 34 321?

22 569					
--------	--	--	--	--	--

34 321					
--------	--	--	--	--	--

□ is greater than □.

2 Which is smaller, 76 083 or 67 380?

76 083					
--------	--	--	--	--	--

67 380					
--------	--	--	--	--	--

□ is smaller than □.

3 Fill in each blank with > or <.

a $11\ 345 \square 13\ 591$

b $43\ 691 \square 34\ 269$

c $70\ 526 \square 69\ 625$

d $90\ 865 \square 99\ 218$

Compare numbers using the place value table

4 Compare each set of numbers in the place value table.

a

	Ten thousands	Thousands	Hundreds	Tens	Ones
32 564	3	2	5	6	4
37 654	3	7	6	5	4

is greater than .

b

	Ten thousands	Thousands	Hundreds	Tens	Ones
65 123	6	5	1	2	3
60 321	6	0	3	2	1

is smaller than .

5 Compare each set of numbers by filling in the place value table. Fill in the boxes with > or <.

a 84 560 and 80 600

	Ten thousands	Thousands	Hundreds	Tens	Ones
84 560					
80 600					

84 560 80 600

b 49 400 and 43 004

	Ten thousands	Thousands	Hundreds	Tens	Ones
49 400					
43 004					

49 400 43 004

Ordering Numbers

6 Compare and order the following numbers by filling in the place value table.

a

	Ten thousands	Thousands	Hundreds	Tens	Ones
76 846					
71 790					
78 002					

is greatest. is smallest.

Arranged in order, beginning with the greatest:

, ,

b

	Ten thousands	Thousands	Hundreds	Tens	Ones
25 569					
30 100					
19 900					
28 540					

is smallest. is greatest.

Arranged in order, beginning with the smallest:

, , ,

7 Circle the greatest number.

a 92 741 96 539 90 567 96 800

b 43 904 33 409 13 004 23 400

8 Circle the smallest number.

a 50 880 51 905 60 001 50 808

b 68 056 80 560 68 506 88 065

9 Arrange the following numbers, beginning with the smallest.

33 015, 35 150, 33 510

, ,

10 Arrange the following numbers, beginning with the greatest.

40 618, 48 861, 40 168, 48 816


, , ,

11 Form the greatest 5-digit number from the given digits.

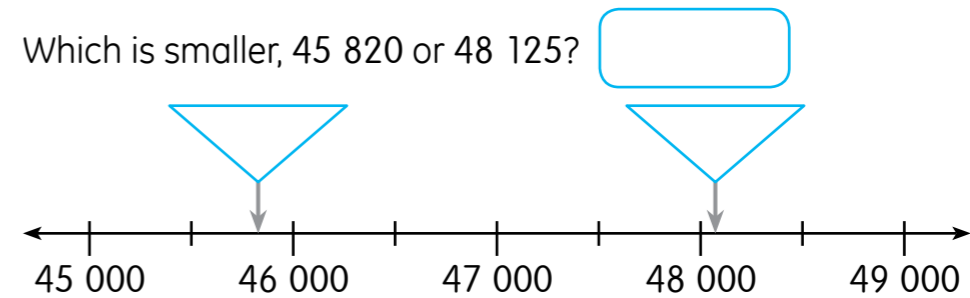
a 1, 5, 0, 7, 4

b 8, 2, 3, 6, 9

Compare numbers using the number line

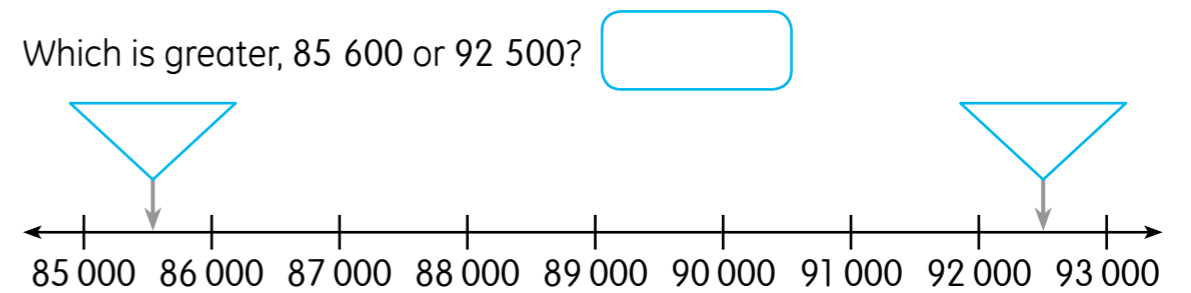
12 Fill in each  with the correct number and compare each set of numbers using the number line.

a Which is smaller, 45 820 or 48 125?



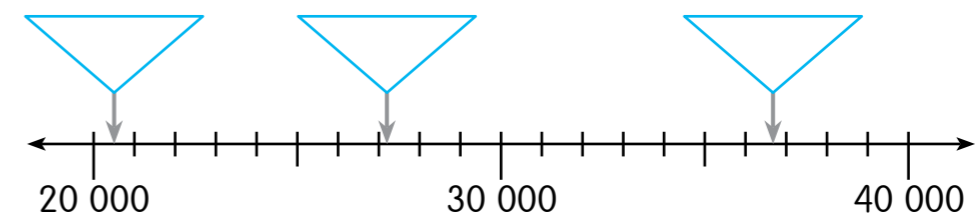
is smaller than .

b Which is greater, 85 600 or 92 500?



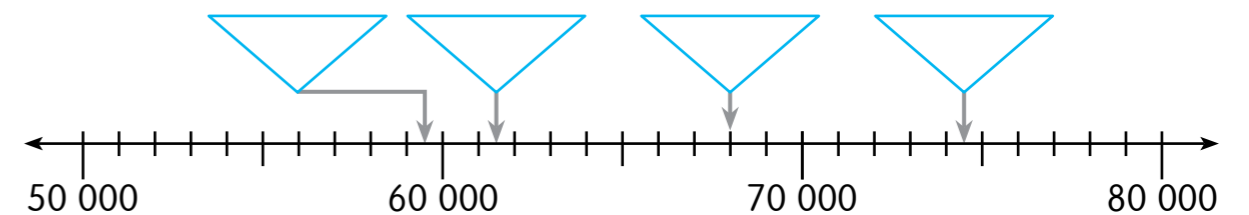
is greater than .

13 Use the number line given to order the numbers 27 200, 36 700 and 20 500, beginning with the smallest.



, ,

14 Use the number line to order the numbers 61 400, 59 900, 68 000 and 74 300, beginning with the greatest.



, , ,

More Than and Less Than

15 Fill the missing numbers.

a 1000 more than 52 382 is .

b 5000 less than 71 623 is .

c 60 000 more than 27 273 is .

d 50 000 less than 94 098 is .

*e 2002 more than 22 563 is .

*f 10 020 less than 74 754 is .

16 Fill in the boxes.

a is 10 000 more than 81 902.

b is 40 000 less than 66 237.

c 59 479 is more than 19 479.

d 7345 is less than 97 345.

*e 38 083 is less than 58 085.

*f is 30 003 more than 20 292.

Number Pattern

17 Complete the number patterns.

a 45 606, 55 606, 65 606, ,

b 82 791, 72 791, 62 791, ,

c 76 939, 66 939, 56 939, ,

d 61 865, , , 31 865, 21 865

e 13 140, , 53 140, , 93 140

f , 44 527, 54 527, , 74 527

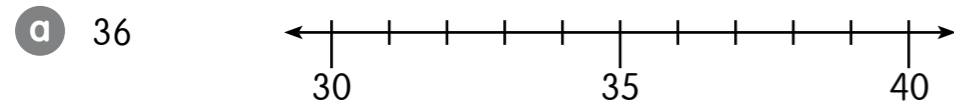
g 90 128, , , 30 128, 10 128

*h 24 030, , 44 050, 54 060,

*i 80 385, , , 50 355, 40 345

Exercise 4 Rounding Numbers To The Nearest Ten

1 Study each number line and fill in the blanks.

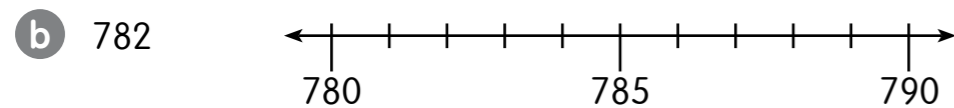


36 is between and .

It is nearer to than to .

36 is when rounded to the nearest ten.

$36 \approx$

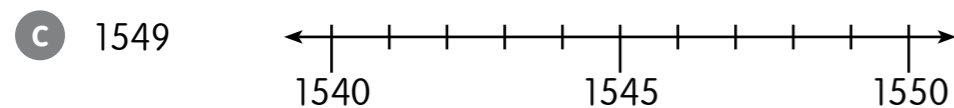


782 is between and .

It is nearer to than to .

782 is when rounded to the nearest ten.

$782 \approx$

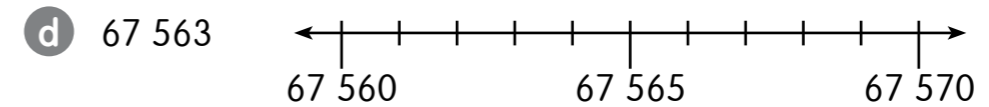


1549 is between and .

It is nearer to than to .

1549 is when rounded to the nearest ten.

$1549 \approx$



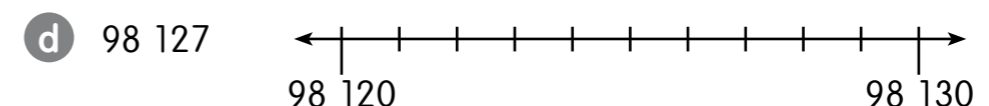
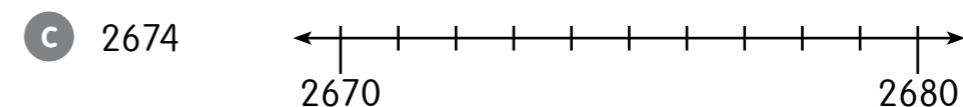
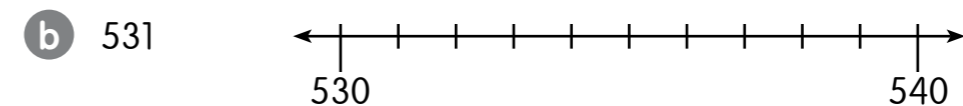
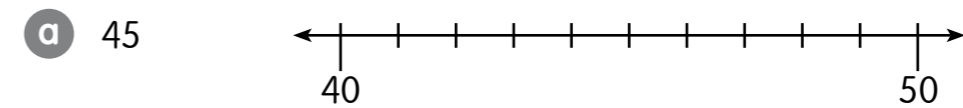
67 563 is between and .

It is nearer to than to .

67 563 is when rounded to the nearest ten.

$67\ 563 \approx$

2 Indicate each number on the number line with an arrow . Round the number to the nearest ten. Circle the answer .



3 Round the following numbers to the nearest ten.

a $7568 \approx$

b $9249 \approx$

c $63\,573 \approx$

d $87\,205 \approx$

*4 What are the possible answers to these descriptions?

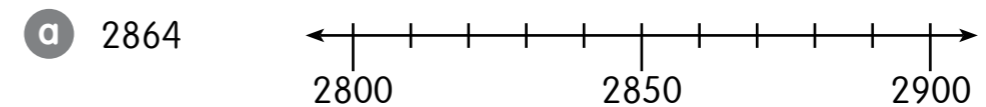
a A number is 4580 when rounded to the nearest ten.
What is the **i** smallest possible number? **ii** greatest possible number?

b A number is 96 720 when rounded to the nearest ten.
What is the **i** smallest possible number? **ii** greatest possible number?

(Draw number lines to help you attain your answers.)

Exercise 5 Rounding Numbers To The Nearest Hundred

1 Study each number line and fill in the blanks.

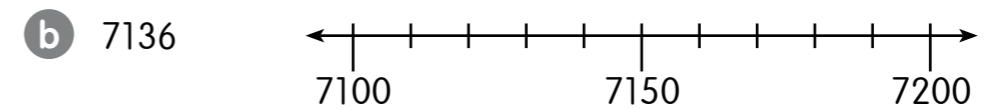


2864 is between and .

It is nearer to than to .

2864 is when rounded to the nearest hundred.

$2864 \approx$

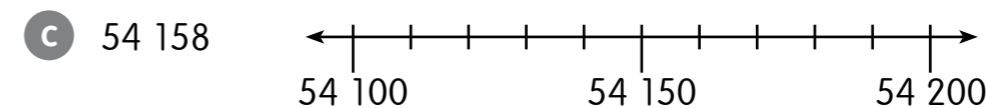


7136 is between and .

It is nearer to than to .

7136 is when rounded to the nearest hundred.

$7136 \approx$

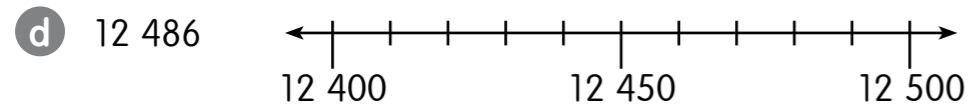


54 158 is between and .

It is nearer to than to .

54 158 is when rounded to the nearest hundred.

$54\,158 \approx$



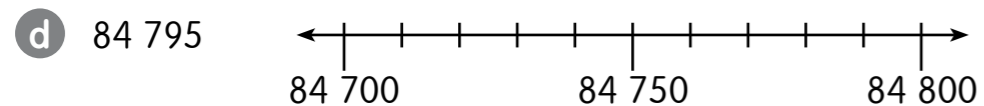
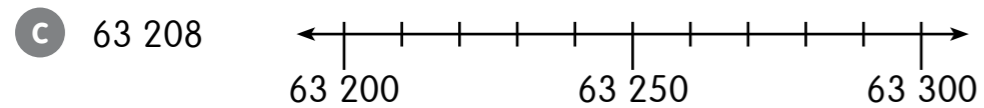
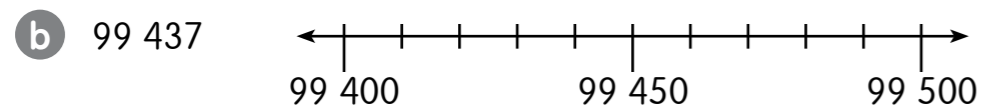
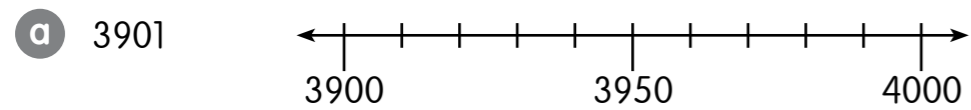
12 486 is between and .

It is nearer to than to .

12 486 is when rounded to the nearest hundred.

12 486 \approx

2 Indicate each number on the number line with an arrow . Round the number to the nearest hundred. Circle the answer .



3 Round the following numbers to the nearest hundred.

a 17 451 \approx

c 72 935 \approx

b 50 846 \approx

d 26 077 \approx

*4 The following numbers in have been rounded to the nearest hundred. State, for each given rounded answer, a the smallest possible number; b the greatest possible number.

(Draw number lines to help you.)

i a \approx 4800

b \approx 4800

ii a \approx 6900

b \approx 6900

iii a \approx 31 100

b \approx 31 100

iv a \approx 78 500

b \approx 78 500

5 Fill in the table.

Rounded to nearest ...	75	923	3750	49 952
Ten				
Hundred				

Exercise 6 Estimation

1 Round each number to the nearest ten. Then estimate the value of the following:

a $562 + 25 \approx \square + \square$
 $= \square$

c $9038 - 955 \approx \square - \square$
 $= \square$

b $657 - 389 \approx \square - \square$
 $= \square$

d $4769 + 1487 \approx \square + \square$
 $= \square$

2 Round each number to the nearest hundred. Then estimate the value of the following:

a $562 + 253 \approx \square + \square$
 $= \square$

c $9038 - 955 \approx \square - \square$
 $= \square$

b $657 - 389 \approx \square - \square$
 $= \square$

d $4769 + 1487 \approx \square + \square$
 $= \square$

Hmm ... are my answers the same or different when I round to ten compared to rounding to hundred?

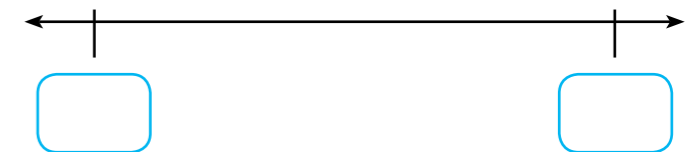


3 Round each number accordingly. Then estimate the product.

Rounded to nearest ...			
Ten	a 23×6	$\approx \square \times 6$	$= \square$
	b 718×4	$\approx \square \times 4$	$= \square$
Hundred	c 466×8	$\approx \square \times 8$	$= \square$
	d 823×3	$\approx \square \times 3$	$= \square$

4 Estimate the values of the following. (Use the number lines to show your steps.)

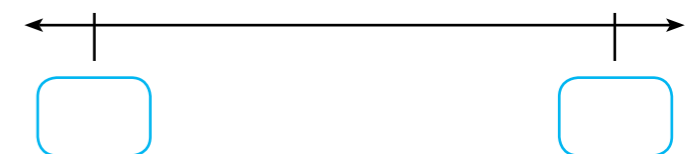
a $94 \div 4 \approx \square \div 4$
 $= \square$



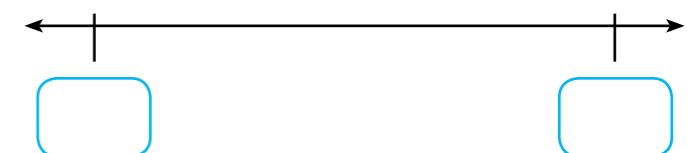
b $358 \div 5 \approx \square \div 5$
 $= \square$



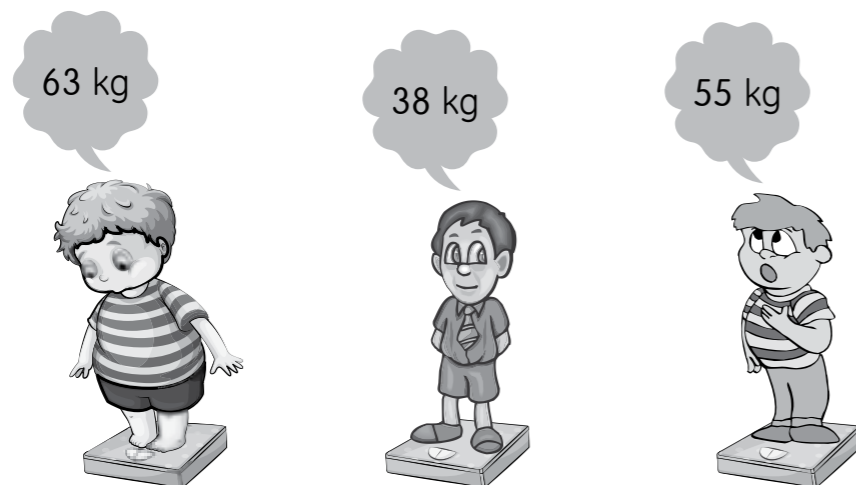
c $665 \div 7 \approx \square \div 7$
 $= \square$



d $552 \div 3 \approx \square \div 3$
 $= \square$

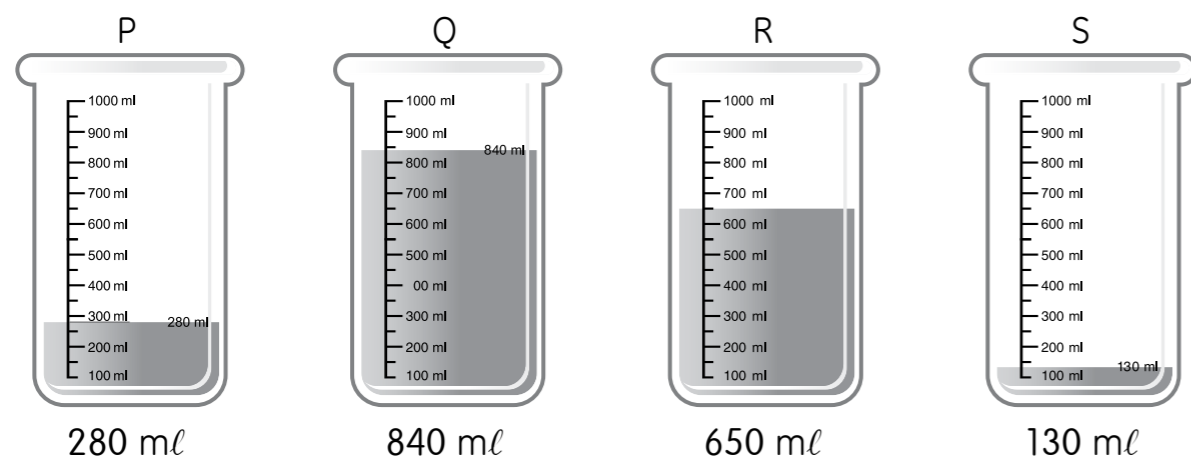


5



- Round the mass of each pupil to the nearest ten.
- Estimate the total mass of the 3 pupils.
- Estimate the difference in masses between the heaviest and lightest pupils.

6



- Round the volume of water in each container to the nearest hundred.
- Estimate the total volume of water in all 4 containers.
- Estimate the difference between the greatest and least volume.
- The water in container P is poured into 6 cups equally. Estimate the volume of water in each cup.

Something More Exciting

In the addition below, what digits do X and Y stand for?

$$\begin{array}{r} 3 \ X \\ 3 \ X \\ \hline Y \ 8 \end{array} +$$

$X = \square$

$Y = \square$

Hmm...is there only one possible answer?



What Do You Remember?

9 099

990

90 999

909

99 009

- Draw up a place value table.
Place each of the above numbers in the correct slot.
- State the place and value of every digit in each number.
- Write out each number in words.
- Compare the numbers. Arrange them from greatest to smallest.
- Round each number to the nearest **i** ten **ii** hundred.
- Estimate the following:
 - $99\ 009 - 9099$
 - $990 + 9099$
 - 990×9
 - $990 \div 9$