

For Supervisor's use only

1

90151



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA



National Certificate of Educational Achievement
TAUMATA MĀTAURANGA Ā-MOTU KUA TĀEA

Level 1 Mathematics, 2005

90151 Solve straightforward number problems in context

Credits: Three

9.30 am Monday 21 November 2005

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should answer ALL the questions in this booklet.

You should show ALL working.

If you need more space for any answer, use the page(s) provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–7 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

<i>For Assessor's use only</i>			Achievement Criteria		
Achievement		Achievement with Merit	Achievement with Excellence		
Solve straightforward number problems in context.	<input type="checkbox"/>	Solve number problems in context involving manipulation, several steps or reversing processes.	<input type="checkbox"/>	Devise a strategy and solve a number problem.	<input type="checkbox"/>
Overall Level of Performance					<input type="checkbox"/>

You are advised to spend 25 minutes answering the questions in this booklet.

AT SCHOOL

You should show **ALL** working.

QUESTION ONE

This table shows the numbers of boys, girls and the total number of students in each year level at Bayview College in 2005.

Student Numbers at Bayview College	Year 9	Year 10	Year 11	Year 12	Year 13	
Boys	110	120	115	70		
Girls	120	135	125	75		
Totals	230	255	240	145	80	950

- (a) In Year 13, the ratio of **boys:girls** is 2:3.

Calculate the number of boys and the number of girls in Year 13 at Bayview College in 2005.

Number of Boys = _____ Number of Girls = _____

- (b) In Year 11, $\frac{1}{5}$ of the students walk to school, $\frac{1}{4}$ catch the bus, and the rest cycle to school.

How many of the Year 11 students **cycle** to school?

Number of Year 11 who cycle = _____

- (c) One day, 52 students are **absent** from school.

What **percentage** of the students are **absent** that day?

Percentage of students absent = _____

- (d) In 2006, the number of students at Bayview College is predicted to be 9% more than 2005.

Calculate this predicted number of students at Bayview College, for 2006.

Number of students for 2006 = _____

QUESTION TWO

In 2005, there are 240 students in Year 11 at Bayview College.
This is a 12% increase over 2004.

How many students were in Year 11 at Bayview College in 2004?

Number of students at Bayview College in 2004 = _____

QUESTION THREE

There are 44 700 Year 11 students sitting these NCEA examinations.
They will use 5.811×10^6 sheets of A4 paper.

On average, how many sheets of A4 paper per student, does this represent?

Number of sheets of paper = _____

QUESTION FOURAssessor's
use only

The table shows student numbers for this year at Seaview College.

Student Numbers at Seaview College

Year Level	Year 9	Year 10	Year 11	Year 12	Year 13	Total
Roll Numbers	240	280	310	230	125	1185

In 2006, at Seaview College, the Years 9 and 10 roll is expected to increase by $\frac{1}{4}$.

The Years 11 and 12 roll is expected to drop by 10%.

Fifteen fewer students are expected in Year 13.

Calculate the percentage change in the total roll at Seaview College from 2005 to 2006.

Percentage change = _____ %

