**PARALLEL QUESTIONS FROM THE 2013 NCEA EXAMINATIONS**

ALGEBRA

ACHIEVEMENT

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| --- | --- |
| 1a Factorise  ***8x2 – 2x – 3*** | 1b Solve  ***8x2 – 2x – 3 = 0*** |
| 2a Simplify  (2b3)5  (4b5)2 | 2b Simplify  **⅓**  8c6  27d9 |
| 3a Solve  Log (64) = 2  ***x*** | 3b Ann borrows $4000 at the beginning of her UNI course.  If she passes all her exams, she is told her loan will reduce by 30% each year.  Write an expression for the amount she owes after n years. |

**PARALLEL QUESTIONS FROM THE 2013 NCEA EXAMINATIONS**

ALGEBRA

MERIT

|  |  |
| --- | --- |
| 1c Simplify FULLY  ***3x2 – 48***  ***x2 + x – 20*** | 1d  Solve ***(x + 4) – 2√(x + 4) – 3 = 0***  ***HINT let b = x + 4*** |
| 2c Simplify  × | 2d  Bill thinks of a number  He squares it  Then multiplies by 4  Then adds 4 times the original number The answer is 24  Find his number. |
| 3c Solve  ***2(x + 4) = 32×8x*** | 3d Ann borrows $4000 at the beginning of her UNI course.  If she passes all her exams, she is told her loan will reduce by 30% each year.  How long will she study for if she owes less than $500 |