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| Year  10A | | *Logarithms* | Non Calculator  Section |
| **Skills and Knowledge Assessed:**   * Use the definition of a logarithm to establish and apply the laws of logarithms (ACMNA265) | | | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Section 1** Non Calculator Section | | | |
| Write all working and answers in the spaces provided on this test paper. | | | |
|  | Evaluate  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | Simplify  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | Write a logarithm statement which is equivalent to  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | The graph of  is reflected in the line  What is the equation of the resulting graph?  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | Evaluate  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | Use the following information to answer questions 6 and 7.  and . | | |
|  | Evaluate  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | Evaluate  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | Evaluate  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | The line  What are the coordinates of the point of intersection of the two graphs?  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | Express  as a single logarithm to base *a*.  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |

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| Year  10A | | *Logarithms* | Calculator Allowed  Section |
|  | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Section 2** Multiple Choice Section | | | |
| Mark all your answers on the accompanying multiple choice answer sheet, not on this test paper. You may do any working out on this test paper. Calculators are allowed for this section. | | | |
|  | is equivalent to :  A.  B.  C.  D. | | |
|  | Which is the graph of  ?  A. B.  C. D. | | |
|  | What is the value of ?  A. 1 B. 2 C. 3 D. 9 | | |
|  | A.  B.  C.  D. | | |
|  | A.  B.  C.  D. | | |
|  | A.  B.  C.  D. | | |
|  | Given  = 0.43 and  = 0.68, evaluate  A. 0.2924 B. 0.8924 C. 1.11 D. 1.79 | | |
|  | Simplify  A. 2 B. 2*a* C. 7 D. 7*a* | | |
|  | Given that  find the value of *m*.  A. 2 B. 5 C. 10 D. 100 | | |
|  | Simplify  A.  B.  C.  D. | | |

*Multiple Choice Answer Sheet*

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Completely fill the response oval representing the most correct answer.

1. A B C D

2. A B C D

3. A B C D

4. A B C D

5. A B C D

6. A B C D

7. A B C D

8. A B C D

9. A B C D

10. A B C D

*Logarithms*

ANSWERS

|  |  |
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| Section 1 | |
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|  |  |
|  |  |
|  | Substitute |
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|  |  |
| --- | --- |
| Section 2 | |
|  | A |
|  | B |
|  | C |
|  | D |
|  | B |
|  | A |
|  | D |
|  | A |
|  | C |
|  | C |

*Multiple Choice Answer Sheet*

Name Marking Sheet

Completely fill the response oval representing the most correct answer.

1. A B C D

2. A B C D

3. A B C D

4. A B C D

5. A B C D

6. A B C D

7. A B C D

8. A B C D

9. A B C D

10. A B C D