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| Year  10 | | Mathematics Test  Surds | | Calculator Allowed |
| Short Answer Section | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | Write all working and answers in the spaces provided on this test paper. | | | |
| 1. | Simplify .  .......................................................................................................................................................... | | | |
| 2. | Simplify .  .......................................................................................................................................................... | | | |
| 3. | Simplify .  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 4. | Simplify .  .......................................................................................................................................................... | | | |
| 5. | Simplify  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 6. | Simplify .  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 7. | Simplify .  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 8. | Expand .  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 9. | Expand .  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 10. | Expand and simplify .  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 11. | Express with a rational denominator.  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 12. | Express with a rational denominator.  ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 13. | If  find the value of *x*.  ..........................................................................................................................................................  .......................................................................................................................................................... | | | |
| 14. | Arrange the numbers below in ascending order.    ..........................................................................................................................................................    .......................................................................................................................................................... | | | |
| 15. | Expand and simplify .  ..........................................................................................................................................................    ..........................................................................................................................................................    .......................................................................................................................................................... | | | |

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| Year  10 | | Mathematics Test  Surds | | Calculator Allowed |
| Multiple Choice Section | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | 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. | | | |
| 1. | Which of the numbers below is irrational?  A.  B.  C.  D. | | | |
| 2. | A.  B.  C.  D. | | | |
| 3. | If  then *y* = ?  A. 24 B. 72 C. 192 D. 576 | | | |
| 4. | Which of the following is in ascending order?  A.  B.  C.  D. | | | |
| 5. | A.  B.  C.  D. | | | |
| 6. | A.  B.  C.  D. | | | |
| 7. | A.  B.  C.  D. | | | |
| 8. | A. 1 B.  C.  D. | | | |
| 9. | A.  B.  C.  D. | | | |
| 10. | A.  B.  C.  D. | | | |
| 11. | A.  B.  C.  D. | | | |
| 12. | A.  B.  C.  D. | | | |
| 13. | Rationalise the denominator of the fraction  A.  B.  C.  D. | | | |
| 14. | Express  as a fraction with a rational denominator.  A.  B.  C.  D. | | | |

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| Year  10 | Mathematics Test  Surds | Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Multiple Choice Answer 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

11. A B C D

12. A B C D

13. A B C D

14. A B C D

15. A B C D

|  |  |
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|  | Mathematics Test  Surds |
| Answer Sheet |

|  |  |
| --- | --- |
| Short Answer | |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 | 175 |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 |  |
| 11 |  |
| 12 |  |
| 13 | 567 |
| 14 |  |
| 15 |  |

|  |  |
| --- | --- |
| Multiple Choice | |
| 1 | C |
| 2 | C |
| 3 | B |
| 4 | A |
| 5 | D |
| 6 | C |
| 7 | A |
| 8 | B |
| 9 | C |
| 10 | A |
| 11 | B |
| 12 | C |
| 13 | A |
| 14 | C |