|  |  |  |  |
| --- | --- | --- | --- |
| *School Name*  *Mathematics Test 2017* | | | |
| Year 10 | | *Factorisation* | Calculator Allowed |
| **Skills and Knowledge Assessed:**   * Factorise algebraic expressions by taking out a common algebraic factor (ACMNA230) * Apply the four operations to simple algebraic fractions with numerical denominators (ACMNA232) * Expand binomial products and factorise monic quadratic expressions using a variety of strategies (ACMNA233) * Extension - Factorise non-monic quadratic expressions | | | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Section 1** Short Answer Section | | | |
| Write all working and answers in the spaces provided on this test paper. | | | |
|  | Factorise .  ………………………………………………………………………………………………. | | |
|  | Factorise .  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ………………………………………………………………………………………………. | | |
|  | Factorise  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | Factorise  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | Factorise  ……………………………………………………………………………………………….  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |
|  | Factorise  .  ……………………………………………………………………………………………….  ……………………………………………………………………………………………….  ………………………………………………………………………………………………. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| *School Name*  *Mathematics Test 2017* | | | |
| Year 10 | | *Factorisation* | Calculator Allowed |
| 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. | | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |
|  | Factorise  A.  B.  C.  D. | | |

|  |  |  |
| --- | --- | --- |
| *School Name*  *Mathematics Test 2017* | | |
| Year 10 | *Factorisation* | Calculator Allowed |
| Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Section 3** Longer Answer Section | | |
| Write all working and answers in the spaces provided on this test paper. | | |

|  | | **Marks** |
| --- | --- | --- |
| 1. | Simplify the following algebraic fractions, by first factorising. |  |
|  | (a)  ……………………………………………………………………………………………....  ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | **2** |
|  | (b)  ……………………………………………………………………………………………....  ……………………………………………………………………………………………....  ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | **2** |
| 2. | Simplify the following algebraic fractions, by first factorising. |  |
|  | (a)  ……………………………………………………………………………………………....  ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | **2** |
|  | (b)  ……………………………………………………………………………………………....  ……………………………………………………………………………………………....  ……………………………………………………………………………………………....  ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | **3** |
|  | (c)  ……………………………………………………………………………………………....  ……………………………………………………………………………………………....  ……………………………………………………………………………………………....  ……………………………………………………………………………………………....  ………………………………………………………………………………………………. | **3** |

*School Name*

*Mathematics 2017*

*Multiple Choice Answer Sheet*

*Factorisation*

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

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

16. A B C D

|  |  |  |
| --- | --- | --- |
| *School Name*  *Mathematics Test 2017* | | |
| Year 10 | *Factorisation* | Non Calculator Section |

ANSWERS

| Question | Working and Answer |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

|  |  |  |
| --- | --- | --- |
| *School Name*  *Mathematics Test 2017* | | |
| Year 10 | *Factorisation* | Calculator Allowed  Multiple Choice  Section |

ANSWERS

|  |  |  |
| --- | --- | --- |
| Question | Working | M C Answer |
|  |  | **A** |
|  |  | **B** |
|  |  | **A** |
|  |  | **D** |
|  |  | **C** |
|  |  | **C** |
|  |  | **D** |
|  |  | **A** |
|  |  | **B** |
|  |  | **A** |
|  |  | **D** |
|  |  | **C** |
|  |  | **B** |
|  |  | **B** |
|  |  | **A** |
|  |  | **C** |

*School Name*

*Mathematics 2017*

*Multiple Choice Answer Sheet*

*Factorisation*

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

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

16. A B C D

|  |  |  |
| --- | --- | --- |
| *School Name*  *Mathematics Test 2017* | | |
| Year 10 | *Factorisation* | Calculator Allowed  Longer Answer  Section |

ANSWERS

| Question | Working and Answer | Marks |
| --- | --- | --- |
| 1. | (a) | **2 marks for correct answer**  **1 mark for answer with some correct factorisation or cancellation** |
|  | (b) | **2 marks for correct answer**  **1 mark for answer with some correct factorisation or cancellation** |
| 2. | (a) | **2 marks for correct answer**  **1 mark for answer with some correct factorisation or cancellation** |
|  | (b) | **3 marks for correct answer**  **2 marks for otherwise correct answer with minor error**  **1 mark for answer with some correct factorisation or cancellation** |
|  | (c) | **3 marks for correct answer**  **2 marks for otherwise correct answer with minor error**  **1 mark for answer with some correct factorisation or cancellation** |