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| --- | --- | --- | --- |
| Year 10 | | *Simultaneous Equations* | Non Calculator |
| **Skills and Knowledge Assessed:**   * Solve linear simultaneous equations, using algebraic and graphical techniques including using digital technology (ACMNA237) | | | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Section 1Short Answer Section | | | |
| Write all working and answers in the spaces provided on this test paper. | | | |
|  | Use an algebraic method to solve simultaneously  ..........................................................................................................................................................    .......................................................................................................................................................... | | |
|  | Use an algebraic method to solve simultaneously  ..........................................................................................................................................................    ..........................................................................................................................................................  .......................................................................................................................................................... | | |
|  | What is the *x* value of the point of intersection of .  ..........................................................................................................................................................    ..........................................................................................................................................................    .......................................................................................................................................................... | | |
|  | Solve the simultaneous equations:  ..........................................................................................................................................................    ..........................................................................................................................................................  .......................................................................................................................................................... | | |
|  | Find the values of *k* and *m* which simultaneously solve the equations  ..........................................................................................................................................................    ..........................................................................................................................................................  .......................................................................................................................................................... | | |
|  | Find the point of intersection of  ..........................................................................................................................................................    ..........................................................................................................................................................  .......................................................................................................................................................... | | |
|  | Questions 7 – 11 refer to the graph below. | | |
|  | Sketch  on the graph above | | |
|  | Sketch  on the graph above. | | |
|  | Solve simultaneously:  .......................................................................................................................................................... | | |
|  | Solve simultaneously:  .......................................................................................................................................................... | | |
|  | Solve simultaneously:  .......................................................................................................................................................... | | |
|  | Solve simultaneously:  .......................................................................................................................................................... | | |

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| Year 10 | | *Simultaneous Equations* | Calculator Allowed |
| Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Section 2Multiple 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. | | | |
|  | Solve simultaneously  A.  B.  C.  D. | | |
|  | Solve simultaneously  A.  B.  C.  D. | | |
|  | What ordered pair is a solution to the simultaneous equations below?      A.  B.  C.  D. | | |
|  | The solution to a pair of simultaneous equations is shown:    In which line does a mistake occur?   1. Line 1 B. Line 2 C. Line 3 D. Line 4 | | |
|  | Solve simultaneously  A.  B.  C.  D. | | |
|  | When the equations below are solved simultaneously;  A.  B.  C.  D. | | |
|  | Question 7 – 9 refer to the graph below. | | |
|  | Solve  A. (-1, 4) B. (0, 3) C. (1, 8) D. (3, 0) | | |
|  | Solve  A. (-1, 4) B. (0, 3) C. (1, 8) D. (3, 0) | | |
|  | Solve  A. (-1, 4) B. (0, 3) C. (1, 8) D. (3, 0) | | |
|  | The number plane shows the lines  p :,  q : and  r :  .  The points O, A and B are the points where pairs of lines intersect.  The point B is the solution to which pair of simultaneous equations?  A.  B.  C.  D. | | |

# Simultaneous Equations

# 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

*Simultaneous Equations*

# ANSWERS

|  |  |
| --- | --- |
| Section 1 ( 1 mark each) | |
|  | Working and Answers |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |
|  | (1, -7) from graph. |
|  | (-2, 2) from graph. |
|  | (-1, 6) from graph. |
|  | (5, -2) from graph. |

|  |  |  |
| --- | --- | --- |
| Section 2 (1 mark each) | | |
|  | Working | Answers |
|  |  | C |
|  |  | B |
|  |  | A |
|  | Line 4 should be | D |
|  |  | C |
|  |  | A |
|  | (-1, 4) from graph | A |
|  | (1, 8) from graph | C |
|  | (3, 0) from graph | D |
|  |  | B |

# Simultaneous Equations

# 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