MSC506 Introduction / Gr 10 Review NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Linear Systems**

1. Solve the following linear systems (no decimals; fractions only):

|  |  |  |  |
| --- | --- | --- | --- |
| a) |  | b) |  |
| c) |  | d) |  |

|  |  |  |
| --- | --- | --- |
| 2. | Graph the following linear system to show its solution:  |  |

**Quadratics**

3. Factor the following quadratic expressions:

|  |  |  |  |
| --- | --- | --- | --- |
| a) |  | b) |  |
| c) |  | d) |  |

4. Write the following quadratic equations in vertex form and state the vertex:

|  |  |  |  |
| --- | --- | --- | --- |
| a) |  | b) |  |
| c) |  | d) |  |

5. Solve the following quadratic equations (by any means):

|  |  |  |  |
| --- | --- | --- | --- |
| a) |  | b) |  |
| c) |  | d) |  |

6. A model rocket is launched from the ground. After 20 seconds, the rocket reaches a maximum height of 2000 metres. It lands on the ground after 40 seconds. Find the rule that gives the height of the rocket as time passes, and also find the height of the rocket 8 seconds after launch.

|  |  |  |
| --- | --- | --- |
| 7. | Sketch the following parabola, labeling the x-intercepts, y-intercept and vertex:  |  |

**Trigonometry**

|  |  |  |  |
| --- | --- | --- | --- |
| 8. | Solve for the missing angle ϴABC912ϴ | 9. | Solve for the missing side length xABCx65°12 |
| 10. | Solve for the missing angle ϴABC712ϴ | 11. | Solve for the missing side length xABCx52°15 |

|  |  |  |  |
| --- | --- | --- | --- |
| 12. | Solve for the missing angle ϴ30°CAB2235ϴ | 13. | Solve for the missing angle ϴ CAB2429ϴ50° |

14.

12

9

5

4

57°

E

D

B

A

C