Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_

Algebra 2 3rd 6 Weeks Test Review DO ON YOUR OWN PAPER

Simplify. No decimals.

|  |  |  |
| --- | --- | --- |
| 1. | 2. | 3. |
| 4. | 5. |
| 6. | 7. |

Simplify. Show your work.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 8. |  | 10. | 11. -4 | 12. |
| 13. | 14. (-2i)(5i) | 15. 2i(4 – 2i) | 16.  (2 – 3i) + (3 + 4i) | 17. (6 – 8i) – (2 – 4i) |
| 18. (5 + 3i)(4 – i) | |  | | --- | | 19. | | |  | | --- | | 20. | | 21. | 22. |

Solve by taking the square root of both sides of the equation. Show your work.

|  |  |
| --- | --- |
| 23. + 72 = 0 | 24. |

Completing the square

|  |
| --- |
| 25. Find the value that completes the square and rewrite as a perfect square.  = |

Solve by completing the square. Show your work.

|  |
| --- |
| 26. - 4x = 8 |

Solve using the quadratic formula. Show all work.

|  |  |  |
| --- | --- | --- |
| 27. - 3x – 5 = 0 | 28. - x = 3 | 29. = 2x + 4 |

State the discriminant. Then state how many roots there are: 1 real, 2 real. or 2 complex.

|  |  |  |
| --- | --- | --- |
| 30. + 4x + 6 = 0 | 31. + 12x = - 9 | 32. = x + 1 |

IX. Find the axis of symmetry, vertex, y intercept, Then state the maximum or minimum value, sketch a graph.

|  |
| --- |
| 33. |
| 34. |

X. Factor:

|  |  |  |  |
| --- | --- | --- | --- |
| 35. | 36. | 37. | 38. |

XI. Find the zeros: use any method by hand and check with the calculator.

|  |  |
| --- | --- |
| 39. | 40. |