Unit 4 Exam Review

Online version of the Chapter 4 Review Assignment

* Required

1. Email address *

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2. Have you accessed the Khan Academy Class? * 5 points

Mark only one oval.

- ◯ Yes
- ◯ No

Graph the function. Label the vertex and axis of symmetry.

Please graph the following functions on a separate piece of paper. Select if you were able to graph and label the functions. Then compare your graph to the answer key provided and mark if your graphs and labels are correct. Mark if you were unable to graph or label the functions.

3. 1. y = x^2 - 8x- 20 * 2 points

Check all that apply.

- ☐ I graphed and labeled the function.
- ☐ My graph and labels are correct.
- ☐ I was unable to graph or label the function.

4. 2. y = -(x + 3)^2 + 5 * 2 points

Check all that apply.

- [ ] I graphed and labeled the function.
- [ ] My graph and labels are correct.
- [ ] I was unable to graph or label the function.

5. 3. f(x) = -2(x + 4)(x - 2) * 2 points

Check all that apply.

- [ ] I graphed and labeled the function.
- [ ] My graph and labels are correct.
- [ ] I was unable to graph or label the function.

Factor the expression.

Show all of your work.

6. 4. x^2 - 11x + 30 * 3 points

7. 5. z^2 + 2z - 15 * 3 points

8. 6. n^2 - 64 * 3 points

9. 7. 2s^2 + 7s - 15 * 3 points

10. 8. 9x^2 + 30x + 25 * 3 points

11. 9. 6t^2 + 23t + 20 * 3 points

Solve the equation.

Don't forget to state what the variables are equal to.

12. 10. x^2 - 3x - 40 = 0 * 3 points

13. 11. r^2 - 13r + 42 = 0 * 3 points

14. 12. 2w^2 + 13w - 7 = 0 * 3 points

15. 13. $10y^2 + 11y - 6 = 0$ * 3 points

16. 14. $2(m - 7)^2 = 16$ * 3 points

17. 15. $(x + 2)^2 - 12 = 36$ * 3 points

Write the expression as a complex number in standard form.

Remember what i^2 is equal to!

18. 16. (3 + 4i) - (2 - 5i) * 3 points

19. 17. (2 - 7i)(1 + 2i) * 3 points

20. 18. (3+i)/(2 - 3i) * 3 points

Solve the equation by completing the square.

21. 19. x^2 + 4x - 14 = 0 * 3 points

22. 20. x^2 - 10x - 7 = 0 * 3 points

23. 21. 4x^2 + 8x + 3 = 0 * 3 points

Use the quadratic formula to solve the equation.

Find a, b, and c for each equation. Solve each equation on a separate piece of paper. Compare your work to the answer key provided. Mark if your answer is correct.

24. 22. 3x^2 + 10x - 5 = 0 * 3 points

Mark only one oval per row.

	-15	-3	10	0	5	-5	3
a =							
b =							
c =							

25. Was your answer for 22 correct? * 1 point

Mark only one oval.

- Yes
- No

26. 23. 2x^2 - x + 6 = 0 * 3 points

Mark only one oval per row.

	2	-2	0	1	-1	6	12
a =							
b =							
c =							

27. Was your answer for 23 correct? * 1 point

Mark only one oval.

- Yes
- No

28. 24. 5x^2 + 2x + 5 = 0 * 3 points

Mark only one oval per row.

	-5	2	-2	5	0	25	10
a =							
b =							
c =							

29. Was your answer for 24 correct? * 1 point

Mark only one oval.

- ◯ Yes
- ◯ No

Graph the inequality

Please graph the following inequalities on a separate piece of paper. Then compare your graph to the answer key provided and mark if it is correct.

30. 25. y ≥ x^2 - 8 * 3 points

Before you graph, check all features that apply to the quadratic inequality and its graph.

Check all that apply.

- ☐ dotted line
- ☐ solid line
- ☐ greater than
- ☐ less than
- ☐ greater than or equal to
- ☐ less than or equal to
- ☐ opens up
- ☐ opens down

31. Was your graph for 25 correct? * 1 point

Mark only one oval.

- ◯ Yes
- ◯ No

32. 26. y < x^2 + 4x - 21 * 3 points

Before you graph, check all features that apply to the quadratic inequality and its graph.

Check all that apply.

- [ ] dotted line
- [ ] solid line
- [ ] greater than
- [ ] less than
- [ ] greater than or equal to
- [ ] less than or equal to
- [ ] opens up
- [ ] opens down

33. Was your graph for 26 correct? * 1 point

Mark only one oval.

- ◯ Yes
- ◯ No

34. 27. y > -x^2 + 5x + 50 * 3 points

Before you graph, check all features that apply to the quadratic inequality and its graph.

Check all that apply.

- [ ] dotted line
- [ ] solid line
- [ ] greater than
- [ ] less than
- [ ] greater than or equal to
- [ ] less than or equal to
- [ ] opens up
- [ ] opens down

35. Was your graph for 27 correct? * 1 point

Mark only one oval.

- Yes
- No

Write a quadratic function whose graph has the given characteristics.

36. 28. x-intercepts: -7, -3; passes through: (-1, 12) * 1 point

What form should you write this quadratic function in?

Mark only one oval.

- standard form
- vertex form
- intercept form

37. 28. continued * 1 point

Enter your completed quadratic function in the appropriate form.

_____

38. 29. vertex: (-3, -2); passes through: (1, -10) * 1 point

What form should you write this quadratic function in?

Mark only one oval.

- standard form
- vertex form
- intercept form

39. 29. continued * 1 point

Enter your completed quadratic function in the appropriate form.

40. 30. passes through: (4, 8), (7, -4), (8, 0) * 1 point

What form should you write this quadratic function in?

Mark only one oval.

- standard form
- vertex form
- intercept form

41. 30. continued * 1 point

Enter your completed quadratic function in the appropriate form.

42. 31. ASPECT RATIO * 5 points

The aspect ratio of a widescreen TV is the ratio of the screen's width to its height, or 16:9. What are the width and the height of a 32 inch widescreen TV? (Hint: Use the Pythagorean theorem and the fact that TV sizes such as 32 inches refer to the length of the screen's diagonal.)