

Algebra 2 Review Quiz 3 (Chapters 1-5) LOOKALIKE

Name _____

- _____ 1. Solve: $2(2n - 3) = n + 3n - 1 + 5$
- _____ 2. Solve: $\frac{3n + 6}{8} = \frac{n + 2}{3}$
- _____ 3. Solve: $-6(2a - 4) = -2(5a + 2)$
- _____ 4. Solve: $|n + 1| - 4 = 5$
- _____ 5. Solve: $|2n + 1| \leq 11$
- _____ 6. In interval notation, what is $x \leq 3$?
A. $(-\infty, 3)$ B. $(-\infty, 3]$ C. $(3, \infty)$ D. $[3, \infty)$
- _____ 7. What best describes Graph 1 on the Graph page?
A. Continuous B. Infinite Discontinuity
C. Jump Discontinuity D. Endpoint Discontinuity
E. Removeable (Hole) Discontinuity
- _____ 8. What is the DOMAIN of Graph 2 on the Graph Page?
A. $[-2, 4)$ B. $(-2, 4]$ C. $(1, 3]$ D. $[1, 3)$
- _____ 9. What is the RANGE of Graph 2 on the Graph Page?
A. $[-2, 4)$ B. $(-2, 4]$ C. $(1, 3]$ D. $[1, 3)$
- _____ 10. What is the domain of $f(x) = \sqrt{x - 3}$?
A. **R** except $x \neq 3$ B. **R**: $x > 3$ C. **R**: $x \geq 3$ D. **R**
- _____ 11. What is the domain of $f(x) = \frac{2x}{x + 6}$?
A. **R** except $x \neq -6$ B. **R**: $x > -6$ C. **R**: $x \geq -6$ D. **R**
- _____ 12. Looking at Graph 3, what interval is the graph increasing?
A. $(-\infty, -1.2)$ $(1.2, \infty)$ B. $(-1.2, 1.2)$
C. $(-\infty, -2)$ $(2, \infty)$ D. $(-1.2, 3)$

_____ 13. Factor $x^2 - 25$

_____ 14. Factor $x^2 + 7x - 10$

_____ 15. What is the x-intercept of $f(x) = x^2 + 8x + 12$?

_____ 16. What is the y-intercept of $f(x) = x^2 + 8x + 12$?

_____ 17. What is the Right End Behavior of Graph 4?

A. As $x \rightarrow -\infty, f(x) \rightarrow -\infty$ B. As $x \rightarrow -\infty, f(x) \rightarrow \infty$

C. As $x \rightarrow \infty, f(x) \rightarrow -\infty$ D. As $x \rightarrow \infty, f(x) \rightarrow \infty$

_____ 18. When graphing $f(x) = 9(x + 2)^3 - 5$, what is true?

A. The graph shifted left 2 units

B. The graph stretched horizontally

C. The graphed shifted up 5 units

D. None of these things happened.

Look at the graphs on the graph sheet and determine the equation of graph 5 and 6.

Don't worry about the a value. In other words, the answer will not be $f(x) = 3(x + 2)^2 + 4$, but $f(x) = (x + 2)^2 + 4$ (no a value of 3).

_____ 19. Graph 5

_____ 20. Graph 6

_____ 21. Simplify: $\sqrt[3]{8a^4}$

_____ 22. Simplify: $\sqrt{12} + \sqrt{27}$

_____ 23. Simplify: $2\sqrt[3]{2n^8} \cdot \sqrt[3]{4n^4}$

_____ 24. Simplify: $\frac{5}{\sqrt{2}}$

_____ 25. Simplify: $\frac{1 + \sqrt{5}}{3 - \sqrt{5}}$

_____ 26. Simplified to its lowest value, what is i^{213} ?
A. 1 B. -1 C. i D. -i

_____ 27. Simplify $\sqrt{-8a^4}$

_____ 28. Simplify $8i(-2 + 3i)$

_____ 29. Simplify $(5 - 3i)(4 - 2i)$

_____ 30. In simplified exponent form, what is $\sqrt[9]{x^5}$?
A. $x^{\frac{9}{5}}$ B. $x^{\frac{5}{9}}$ C. -5i D. 9i

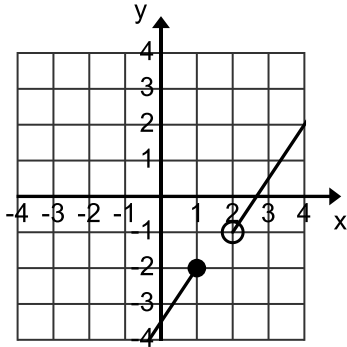
_____ 31. In simplified radical form, what is $x^{\frac{2}{5}} \cdot x^{\frac{1}{2}}$?
A. $\sqrt[9]{x^{10}}$ B. $\sqrt[5]{x}$ C. $x^{10}\sqrt{x}$ D. $\sqrt[10]{x^9}$

_____ 32. In simplified radical form, what is $\left(x^{\frac{2}{3}}\right)^{\frac{4}{5}}$?
A. $\sqrt[15]{x^8}$ B. $x^7\sqrt{x^6}$ C. $x^{15}\sqrt{x^7}$ D. $x^{15}\sqrt{x^3}$

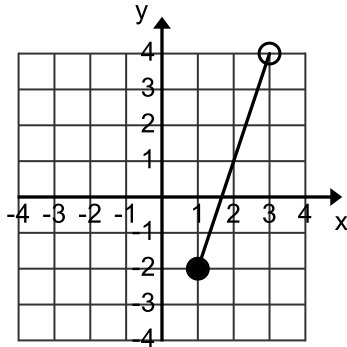
_____ 33. Solve for x: $2\sqrt{2x - 10} + 1 = 9$

Graph Page

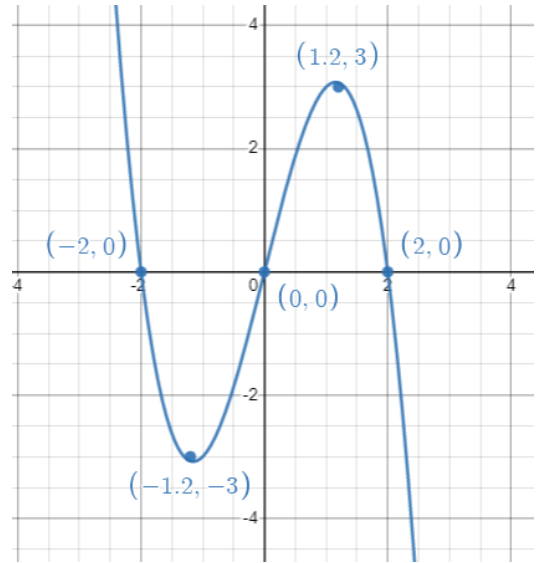
Graph 1



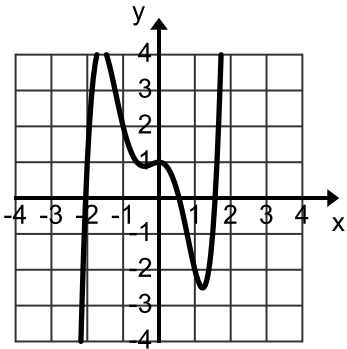
Graph 2



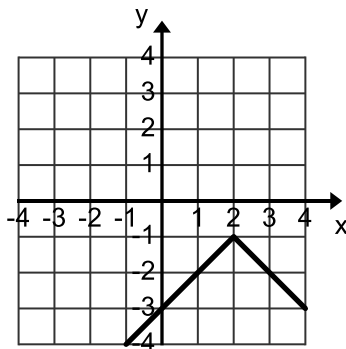
Graph 3



Graph 4



Graph 5



Graph 6

