

ALGEBRA 1

Exam 10

Based on Chapter 10 (pages 628-701) in your textbook.

Student's Name _____ Student Number _____

Street _____ City _____ State _____ Zip Code _____

BE SURE YOU FULLY UNDERSTAND ALL CHECKPOINT PROBLEMS FROM THIS CHAPTER BEFORE YOU COMPLETE THIS EXAM. **SHOW AS MUCH WORK AS POSSIBLE.**

Complete the table for each function.

1. $f(x) = x^2$

x	0	± 1	± 2	± 3
y				

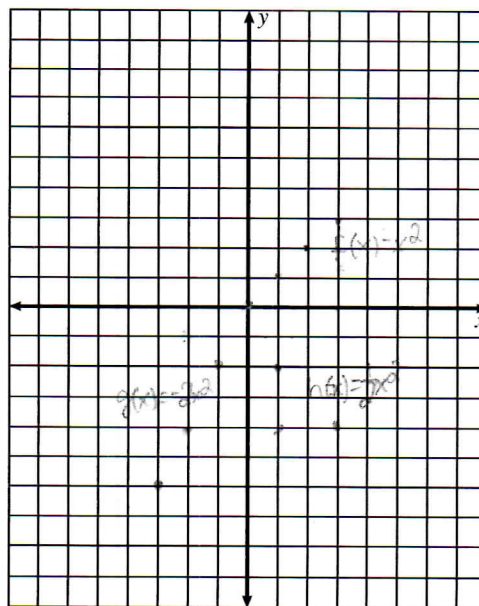
2. $g(x) = -2x^2$

x	0	± 1	± 2	± 3
y				

3. $h(x) = \frac{1}{4}x^2$

x	0	± 1	± 2	± 3
y				

4. Graph each function from problems 1-3 on the grid at the right. Be sure to label your graphs.



ALGEBRA 1 Exam 10 — Continued

Student's Name _____ Student Number _____

Use square roots to solve the following equations; round to the nearest hundredth, if necessary.

9. $5x^2 + 536 = 651$

10. $3z^2 + 52 = -56$

Solve by completing the square; round to the nearest hundredth, if necessary.

11. $x^2 - 3x = 4$

ALGEBRA 1 Exam 10 — Continued

Student's Name _____ Student Number _____

Use $3x^2 + 3x = 21$ to answer problems 18-20. Leave solutions in simplest radical form.

18. Solve by completing the square. Show all work.

19. Use the discriminant to find the number of unique real solutions. Show all calculations.

20. Solve with the quadratic formula. Show all work.

ALGEBRA 1 Exam 10 — Continued

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23. In a diving siblings showcase, 11-year-old Hannah takes off from a 24.61 foot platform with an initial velocity of 9.7 ft/sec at the same time that her brother Tyler, who is 3.5 years older, takes off from a 32.81 foot platform with an initial velocity of 4.51 ft/sec. Who enters the water first? By how much? Round to the nearest hundredth.