

PreJunior Algebraic Systems Summer 2007 PreTest Name: _____

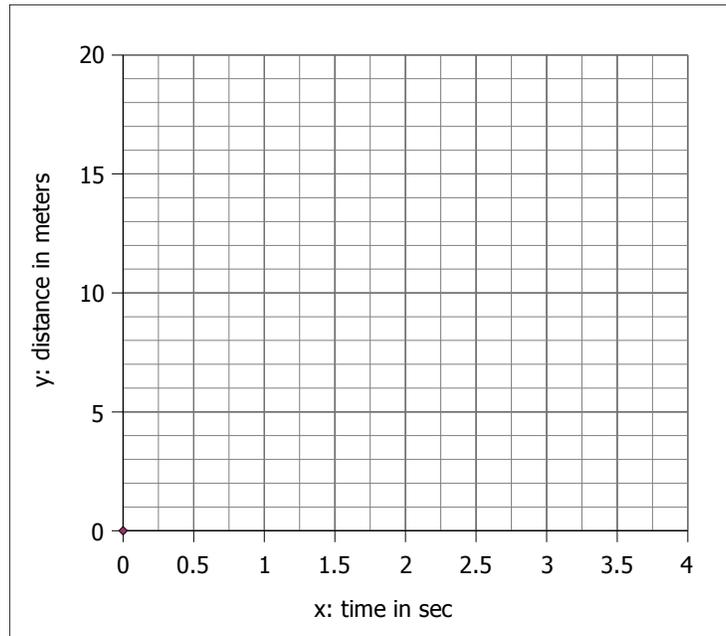
1. _____ What is the mode for the data: 9, 10, 11, 12, 12 ?
2. _____ What is the median for the data: 9, 10, 11, 12, 12 ?
3. _____ What is the mean for the data: 9, 10, 11, 12, 12 ?
4. _____ What is the range for the data: 9, 10, 11, 12, 12 ?

5. _____ A ball is rolling at 7.5 feet per second. How far will the ball roll in six seconds?

6. A ball is rolled. Over a period of four seconds the distance the ball has traveled is recorded.

On the graph on the right **plot** the following x, y data given in the table:

x: time in seconds	y: distance in meters
0	0
1	3
2	6
3	9
4	12



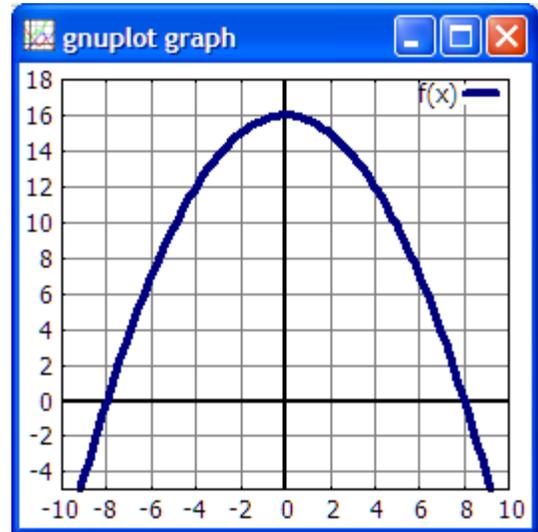
7. _____ What is the y-intercept for the line on the graph in question six?
8. Choose two points on the line from question six to determine the slope of the line using the following steps:
 - 8a. _____ Determine the run between the two points.
 - 8b. _____ Determine the rise between the two points.
 - 8c. _____ Determine the slope of the line.
9. _____ Using the y-intercept from question seven and the slope from question eight, write the slope-intercept form of the line.
10. _____ Use the slope-intercept form of the line you found in question nine to determine how far the ball will roll in 8 seconds.
11. _____ Use the slope-intercept form of the line you found in question nine to determine how long it will take the ball to roll 33 meters.

12. _____ What is the name of the shape of the curved function on the right?

13. _____ What is the y-intercept for the curved function on the right?

14. _____ What are the x-intercepts for the curved function on the right?

15. _____ If you know how to do so, use the x-intercepts to find the factors for the equation that generated the function seen in the graph on the right.



16. _____ If you know how to do so, use the x-intercepts to find b and c in the $y = -ax^2 + bx + c$ equation that generated the function seen in the graph above on the right.

17. _____ Solve for x by factoring: $x^2 + 8x + 15 = 0$

18. _____ Determine $\sqrt{36}$

19. _____ If $d = 4$ and $g = 2$, determine t using the equation: $t = \sqrt{\frac{2d}{g}}$

20. _____ The Fibonacci sequence is given by: 1, 1, 2, 3, 5, 8, 13, 21, 34, 55,... What is the next number in the sequence?

21. _____ Calculate $55 \div 34$ to three decimal places.

22. _____ If you have a calculator, determine $\frac{1+\sqrt{5}}{2}$ to three decimal places.

_____ (I do not have a calculator)