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

**Math 1 Quadratics Test Review**

**A carnival game involves striking a lever that forces a weight up a tube. If the weight reaches 20 feet to ring the bell, the contestant wins a prize. The weight travels with an initial velocity is 32 feet per second.**

1. Write the rule that models the height of the weight as a function of time.
2. How long will it take to reach the maximum height?
3. What is the maximum height?
4. Will a prize be won?

**Miriam has 40 meters of fencing to build a pen for her dog.**

1. Use the figure at the right to write an equation of the area A of the pen.
2. What value of x will result in the greatest area?
3. What is the greatest possible are of the pen?

**Given: y = x2 – x – 2**

8) Fill in the table: 9) Find the max/min 10) Graph 11) State the solutions.



|  |  |
| --- | --- |
| x | y |
| -2 |  |
| -1 |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |

**Factor** the following.

12) 13x + 26y 13) 2x2 – 10x 14) y2 + 7y + 12 15) 2x2 + 10x – 12

**Solve** the following.

16) 3x(x + 7) = 0 17) (3x + 4)(x – 5) = 0 18) m2 – m = 12 19) 11x2 – x = 3