**FOM2 Unit 2 Quiz 1 REVIEW – MATHO QUESTIONS Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
 Date \_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_**

**Find the vertex, state the axis of symmetry, and determine if the function has a max or min.**

1. $y=\left(x-3\right)^{2}+6$ 2. $y=1/2\left(x+7\right)^{2}$ 3. $y=\left(x-2\right)^{2}+5$

3. $y=\left(x+3\right)^{2}$ 5. $y=3x^{2}+6x+1$ 6. $y=-3\left(x+2\right)^{2}+4$

7. $y=2x^{2}+28x-41$ 8. $y=2\left(x-3\right)^{2}+1$

**(EXCLUDED ON MATHO PROBLEMS) Graph the given function by finding the vertex and reflecting two other points.**

9. $y=-\left(x-5\right)^{2}-1$ 10. $ y=\frac{1}{2}\left(x-6\right)^{2}+2$.



******Given the graph, write the equation of the quadratic. Assume that a=1 or -1.**

11. 12. 13.

**Write the equation in standard form.**

14. $y=\left(x+3\right)^{2}-5$ 15. $y=2\left(x-1\right)^{2}-2$ 16. $y=-\left(x+4\right)^{2}+10$

**Write the equation in vertex form.**

17. $y=-2x^{2}+12x+5$ 18. $y=7x^{2}+28x+12$ 19. $y=3x^{2}-8x+10$

**Write the equation for the parabola.**

20. Vertex (-2, -1), passes through (0, -5) 21. Vertex (-1, 1), passes through (2, -17)



22. 23.

**Describe each transformation from the parent function** $y=x^{2}$**. Then state the Vertex.**

24. $y=-(x+3)^{2}-12$ 25. $y=5(x-21)^{2}$ 26. $y=-x^{2}+39$

27. $y=\frac{3}{16}(x-1)^{2}-16$ 28. $y=\frac{10}{3}x^{2}$ 29. $y=2x^{2}-16x+37$

**Write a function for each**

30. A parabola that has a been stretched vertically by a factor of 8 and moved right 11.

31. A parabola that has been shrunk vertically by a factor of $\frac{1}{3}$, has been reflected over the x-axis and moved left 7.

32. A parabola that has been shifted 15 units left, has a vertical stretch factor of 6, and has been shifted up 2.