

Name: _____ Hr: _____

3.3A Writing Quadratic Equations Given Three Points or a Vertex and a Point

Find an equation in standard form of the parabola passing through the points.

1. $(1, -1), (2, -5), (3, -7)$

2.

x	F(x)
-2	-1
2	-1
3	9

3. The table shows the number n of tickets to a school play sold t days after the tickets went on sale, for several days.

a. Find a quadratic equation for the data

Day, t	Number of tickets sold, n
1	32
3	64
4	74

b. Use the equation to find the number of tickets sold on day 7

c. When was the greatest number of tickets sold?

4. The table gives the number of skis sold in a sporting goods store for several months last year.

a. Find a quadratic equation for the data.

Month, t	Number of pairs of skis sold, s
(Jan)1	82
(March)3	42
(May)5	18

b. Use the equation to predict the number of skis sold in November.

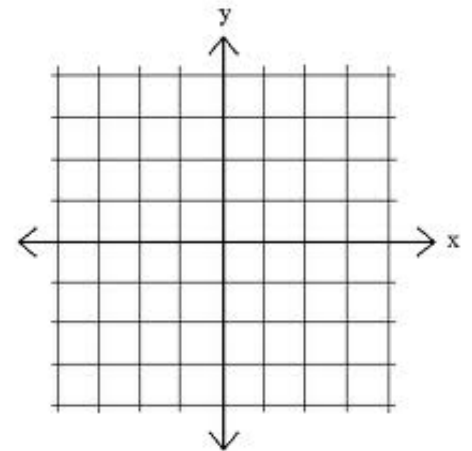
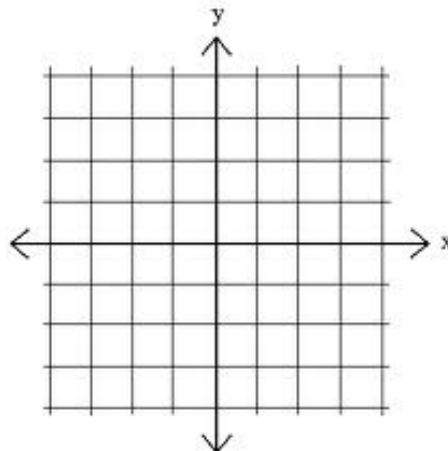
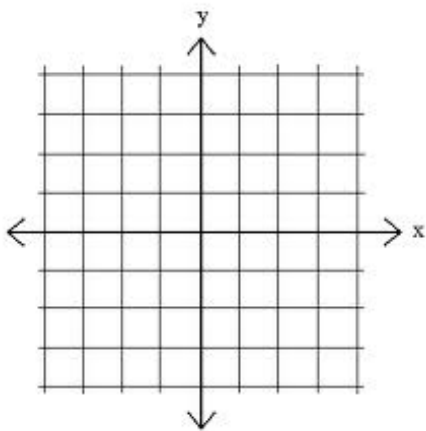
c. In what month was the fewest number of skis sold?

Find an equation for a quadratic function given the following information. Then sketch a graph.

5. Vertex: $(1, 4)$ and a point $(2, 3)$

6. Vertex: $(3, 1)$ and a point $(-1, 5)$

7. Vertex: $(2, -3)$ and y-intercept of -2



8. Use the information provided to find the following:

Vertex: $(2, -4)$ and x-intercept of 1

- A) The equation for the quadratic function.
- B) Sketch a graph.
- C) State the domain and range
- D) Determine if there is a max or min

