

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

Adv. Algebra 2

Date: \_\_\_\_\_ Period: \_\_\_\_\_

Chapter 4: Quadratic Functions

4.3-4.4 Review

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

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

2.  $(2,-8), (3, -8), (6,4)$

3.  $(-1, -12), (0,-6), (3,0)$

4.  $(-1, -6), (0,0), (2,6)$

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

a. Find a quadratic model for the data.

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

c. When was the greatest number of tickets sold?

Days, $t$	# Tickets sold, $n$
1	32
3	64
4	74

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

a. Find a quadratic model for the data, using January as month 1, February as month 2, and so on.

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

c. In which month were the fewest skis sold?

Month, $t$	# Pairs of Skis Sold, $s$
Jan	82
Mar	42
May	18

Factor the following completely

7.  $5x^2 - 17x + 6$

8.  $3x^2 + 10x + 8$

9.  $2x^2 - 9x - 5$

10.  $9x^2 - 6x + 1$

11.  $n^2 - 49$

12.  $2x^2 + 50$

13.  $2x^2 + 9x + 10$

14.  $6y^2 - 5y + 1$

15.  $x^2 + 11x + 28$

16.  $x^2 + 13x + 42$

17. $x^2 - 12x + 32$	18. $-x^2 + 9x - 18$
19. $12x^2 + 10x - 12$	20. $-4x^2 + 2x + 30$
21. $m^2 + 22m + 121$	22. $36x^2 + 12x + 1$
23. $-2x^2 - 32x - 128$	24. $r^2 - 144$
25. $x^2 - 3x - 40$	26. $x^2 - 2x - 15$
27. $x^2 - 7x - 60$	28. $x^2 - 10x + 21$
29. $x^2 + 3x - 54$	30. $x^2 + 11x + 24$