Name: _____ Date: _____

Writing Quadratic Functions - Medium

Write the equation of each parabola in factored form and in standard form.

1. zeros -7 and 3, a = 1
2. zeros -2 and 5, a = 2
3. zeros -5 and 1, a = -2
4. zeros -7 and -3, a = 1
5. zeros -4 and -1, a = 1
6. zeros 4 and 6, a = 3
7. zeros -4 and -3, a = -2
8. zeros -8 and -1, a = -1
9. zeros -7 and 4, a = 1
10. zeros -5 and 4, a = 1

Name: _____ Date: _____

Writing Quadratic Functions - Medium

Write the equation of each parabola in factored form and in standard form.

11. zeros -7 and 1, a = 1

12. zeros -7 and 6, a = 3

13. zeros 3 and 4, a = 3

14. zeros -6 and -3, a = 1

15. zeros 4 and 8, a = 2

16. zeros 2 and 6, a = -2

17. zeros -4 and 4, a = 2

18. zeros -4 and 7, a = -2

19. zeros 2 and 4, a = -1

20. zeros -3 and 3, a = 1

Writing Quadratic Functions - Medium - Answer Key

1. zeros -7 and 3, a = 1

   $y = (x - 3)(x + 7)$; $y = x^2 + 4x - 21$

2. zeros -2 and 5, a = 2

   $y = 2(x - 5)(x + 2)$; $y = 2x^2 - 6x - 20$

3. zeros -5 and 1, a = -2

   $y = -2(x - 1)(x + 5)$; $y = -2x^2 - 8x + 10$

4. zeros -7 and -3, a = 1

   $y = (x + 3)(x + 7)$; $y = x^2 + 10x + 21$

5. zeros -4 and -1, a = 1

   $y = (x + 1)(x + 4)$; $y = x^2 + 5x + 4$

6. zeros 4 and 6, a = 3

   $y = 3(x - 4)(x - 6)$; $y = 3x^2 - 30x + 72$

7. zeros -4 and -3, a = -2

   $y = -2(x + 4)(x + 3)$; $y = -2x^2 - 14x - 24$

8. zeros -8 and -1, a = -1

   $y = -(x + 1)(x + 8)$; $y = -x^2 - 9x - 8$

9. zeros -7 and 4, a = 1

   $y = (x + 7)(x - 4)$; $y = x^2 + 3x - 28$

10. zeros -5 and 4, a = 1

    $y = (x + 5)(x - 4)$; $y = x^2 + x - 20$

Writing Quadratic Functions - Medium - Answer Key

11. zeros -7 and 1, a = 1

$y = (x + 7)(x - 1)$; $y = x^2 + 6x - 7$

12. zeros -7 and 6, a = 3

$y = 3(x + 7)(x - 6)$; $y = 3x^2 + 3x - 126$

13. zeros 3 and 4, a = 3

$y = 3(x - 3)(x - 4)$; $y = 3x^2 - 21x + 36$

14. zeros -6 and -3, a = 1

$y = (x + 6)(x + 3)$; $y = x^2 + 9x + 18$

15. zeros 4 and 8, a = 2

$y = 2(x - 4)(x - 8)$; $y = 2x^2 - 24x + 64$

16. zeros 2 and 6, a = -2

$y = -2(x - 2)(x - 6)$; $y = -2x^2 + 16x - 24$

17. zeros -4 and 4, a = 2

$y = 2(x - 4)(x + 4)$; $y = 2x^2 - 32$

18. zeros -4 and 7, a = -2

$y = -2(x + 4)(x - 7)$; $y = -2x^2 + 6x + 56$

19. zeros 2 and 4, a = -1

$y = -(x - 2)(x - 4)$; $y = -x^2 + 6x - 8$

20. zeros -3 and 3, a = 1

$y = (x - 3)(x + 3)$; $y = x^2 - 9$