

Questions on 2.7HW? 2.6 HW is due today...and we are quizzing.

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5. 4 and $\sqrt{23}$ 6. $-9\frac{3}{4}$ and -8.5 7. $\sqrt{\frac{1}{4}}$ and $\sqrt{\frac{4}{9}}$ 8. $\sqrt{13}$ and $\sqrt{14}$

Set

Topic: Factoring quadratics

$\frac{\sqrt{1}}{\sqrt{4}} = \frac{1}{2} = 0.5000\dots$
 $\frac{\sqrt{4}}{\sqrt{9}} = \frac{2}{3} = 0.6666\dots$

The area of a rectangle is given in the form of a trinomial expression. Find the equivalent expression that shows the lengths of the two sides of the rectangle.

9. $x^2 + 9x + 8$ 10. $x^2 - 6x + 8$ 11. $x^2 - 2x - 8$ 12. $x^2 + 7x - 8$

13. $x^2 - 11x + 24$ 14. $x^2 - 14x + 24$ 15. $x^2 - 25x + 24$ 16. $x^2 - 10x + 24$

17. $x^2 - 2x - 24$ 18. $x^2 - 5x - 24$ 19. $x^2 + 5x - 24$ 20. $x^2 - 10x + 25$

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9. $x^2 + 9x + 8$
 $(x+8)(x+1)$

10. $x^2 - 6x + 8$
 $(x-2)(x-4)$

11. $x^2 - 2x - 8$
 $(x+2)(x-4)$

12. $x^2 + 7x - 8$
 $(x+8)(x-1)$

13. $x^2 - 11x + 24$

14. $x^2 - 14x + 24$

15. $x^2 - 25x + 24$

16. $x^2 - 10x + 24$

17. $x^2 - 2x - 24$

18. $x^2 - 5x - 24$

19. $x^2 + 5x - 24$

20. $x^2 - 10x + 25$

21. $x^2 - 25$

22. $x^2 - 2x - 15$

23. $x^2 + 10x - 75$

24. $x^2 - 20x + 51$

25. $x^2 + 14x - 32$


26. $x^2 - 1$

27. $x^2 - 2x + 1$

28. $x^2 + 12x - 45$

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21. $x^2 - 25$ 22. $x^2 - 2x - 15$ 23. $x^2 + 10x - 75$ 24. $x^2 - 20x + 51$

25. $x^2 + 14x - 32$ 26. $x^2 - 1$ 27. $x^2 - 2x + 1$ 28. $x^2 + 12x - 45$

$x^2 + 0x - 1$
 $(x+1)(x-1)$

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Structures of Expressions | 2.7

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29. $f(x) = x^2$

x	y
-2	4
-1	1
0	0
1	1
2	4
-3	9
3	9

Description:
no transformation $x=0$

30. $g(x) = x^2 - 3$

x	f(x)
-3	-6
-2	-1
-1	-2
0	-3
1	-2
2	-1
3	-6

Description:
down 3 units

31. $h(x) = (x - 2)^2$

32. $b(x) = -(x + 1)^2 + 4$

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Quadratics Quiz #3: Completing the Square

The following quadratic function,

$f(x) = x^2 + 6x + 4$ is not a perfect square.

Answer the following:

1) What must be added or subtracted to make it a perfect square?

2) What is the vertex form for the function after you have completed the square?

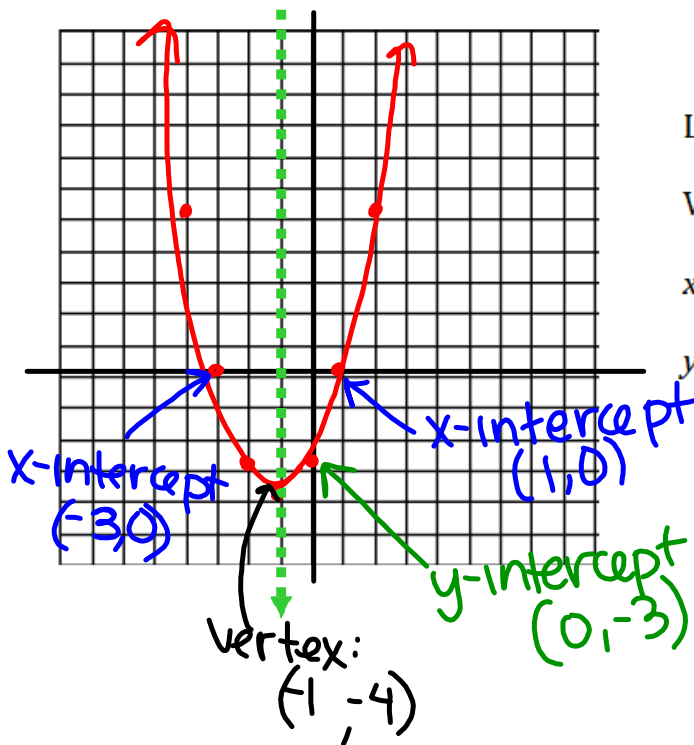
2.8 Lining Up Quadratics

A Practice Understanding Task

Graph each function and find the vertex, the y-intercept and the x-intercepts. Be sure to properly write the intercepts as points.



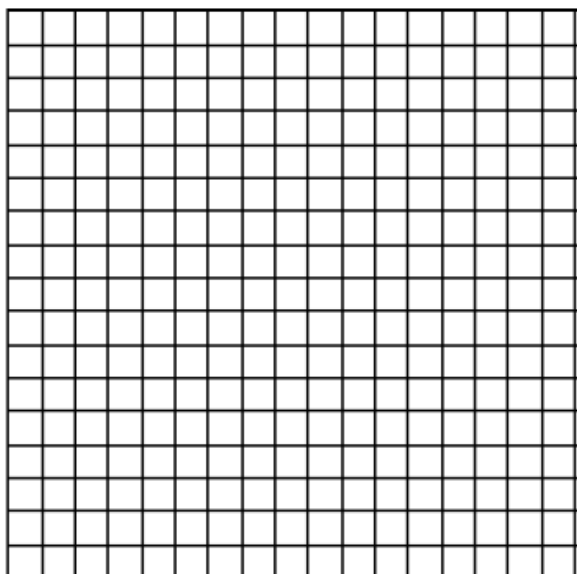
1. $y = (x - 1)(x + 3)$



Line of Symmetry $x = -1$
 Vertex $(-1, -4)$
 x-intercepts $(1, 0)$ $(-3, 0)$
 y-intercept $(0, -3)$

x	y = (x-1)(x+3)
-2	-3 = (-2-1)(-2+3)
-1	-4 = (-1-1)(-1+3)
0	-3 = (0-1)(0+3)
1	0 = (1-1)(1+3)
2	5 = (2-1)(2+3)

2. $f(x) = 2(x - 2)(x - 6)$

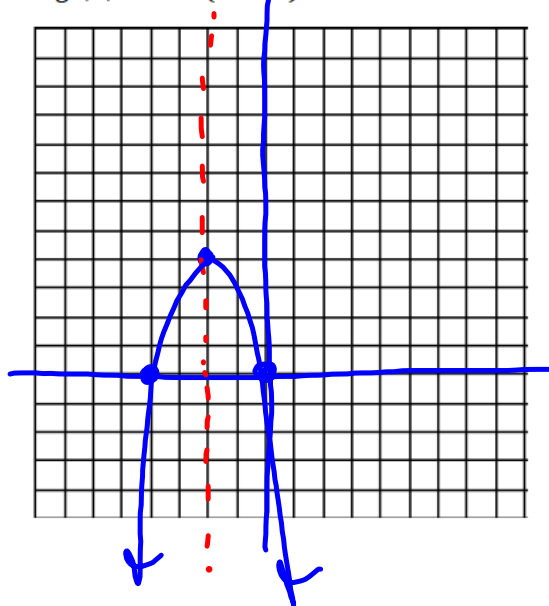


Line of Symmetry _____

Vertex _____

 x -intercepts _____ y -intercept _____

3. $g(x) = -x(x + 4)$



Line of Symmetry $x = -2$
Vertex $(-2, 4)$
x-intercepts $(-4, 0)$ $(0, 0)$
y-intercept $(0, 0)$

4. Based on these examples, how can you use a quadratic function in factored form to:
- Find the line of symmetry of the parabola?
 - Find the vertex of the parabola?
 - Find the x-intercepts of the parabola?
 - Find the y-intercept of the parabola?
 - Find the vertical stretch?

Homework

Finish 2.8 "Ready, Set, Go"