

Test Review 5.3, 5.5 & 5.6

Find the zeros of each function by factoring..

1. $f(x) = 4x^2 - 24x$

2. $f(x) = x^2 + 4x + 3$

3. $f(x) = x^2 - 5x + 4$

Find the roots of each equation by factoring.

4. $4x^2 = 49$

5. $x^2 + 16 = 8x$

Write a quadratic function in standard form for each given set of zeros.

6. -3 and 7

7. 1 and 0

Express each number in terms of i .

8. $\sqrt{-72}$

9. $4\sqrt{-45}$

10. $-2\sqrt{-18}$

Solve each equation.

11. $3x^2 + 81 = 0$

12. $4x^2 = -28$

Find each complex conjugate.

13. $i - 3$

14. $3i - 4$

15. $11i$

Find the type and number of solutions for each equation. Evaluate the discriminant.

16. $x^2 - 12x = -36$

17. $x^2 - 4x = -7$

Find the zeros of each function by using the Quadratic Formula.

18. $f(x) = x^2 + x + 4$

19. $f(x) = -2x^2 + 3x - 1$

20. $f(x) = 3x^2 + 6x + 3$

3. False

4. Upward

5. -6

6. (0.5, -6.25)

7.

x	-2	-1	0	2	4
f(x)	0	-4	-6	-4	6

8. -2 and 3

9. a. 0

b. 2; 5; 0

c. 2; 0; 5; 0

d. -2; 5

10. 1, -1

11. a. $(x - 1)(x - 2)$

b. $x^2 - 3x + 2$

Practice B

1.

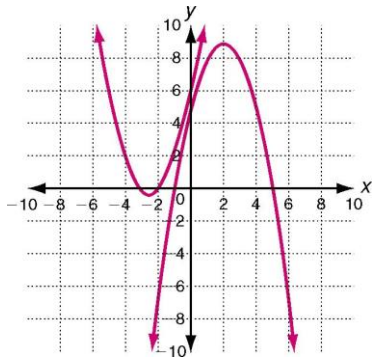
x	-4	-3	-2	-1	0
f(x)	2	0	0	2	5

-2 and -3

2.

x	-2	0	2	4	6
f(x)	-7	5	9	5	-7

-1 and 5



3. -3

4. -0.5, -4

5. -5, 4

6. $\frac{2}{3}$

7. -0.75, 0.75
14

8. $f(x) = x^2 - 5x - 14$

9. $f(x) = x^2 + 7x - 8$

10. About 7.5 s

Practice C

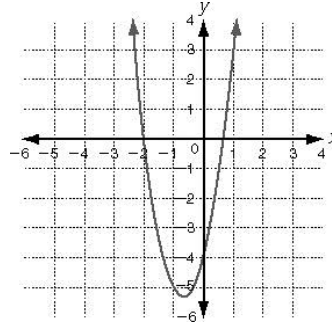
1. -6, -5

2. 0.5, 12

3. $-\frac{1}{3}, \frac{1}{3}$

4. 3.5

5. -2, $\frac{2}{3}$



6. $f(x) = x^2 - 5x - 6$

7. $f(x) = x^3 - 6x^2 - x + 30$

8. For roots 2 and 1: $f(x) = x^2 - 3x + 2$

9. $f(x) = x^2 - 4x$

10. a. $h(t) = -16t^2 + 100t$

b. 6.25 s

Reteach

1. 6; 4x; 6; $x = 0$ or $x = 6$

2. 3; 1; 3; 1; $x = -3$ or $x = -1$

3. $x^2 - 5x + 4 = 0$

$(x - 4)(x - 1) = 0$

$x - 4 = 0$ or $x - 1 = 0$

$x = 4$ or $x = 1$

4. $3x^2 + 12x = 0$

$3x(x + 4) = 0$

$3x = 0$ or $x + 4 = 0$

$x = 0$ or $x = -4$

5. 0

$(2x)^2 - (7)^2 = 0$

$(2x + 7)(2x - 7) = 0$

$2x + 7 = 0$ or $2x - 7 = 0$

$x = -\frac{7}{2}$ or $x = \frac{7}{2}$

6. 0

$x^2 - 2(4)(x) + (4)^2 = 0$

$(x - 4)^2 = 0$

$(x - 4) = 0$

$x = 4$