

SM2H

Unit 3 Factoring and Solving Quadratics Review Key

- 1.
- 2.
- 3.
4. $5x(2x - 1)$
5. prime
6. $(z + 2)(z - 2)$
7. $(v - 7)(v + 3)$
8. $(t - 2)(4r + 1)$
9. $(w + 5)(w - 2)$
10. $(5m^2 - 2)(3m + 1)$
11. prime
12. $-3(4w^3 - 7)$
13. $2(3x + 10)(3x - 10)$
14. $5(p^2 - 5p + 12)$
15. prime
16. $-4(k + 6)(k - 1)$
17. $(n - 2)(4n + 3)$
18. $2n(n^2 + 6)(3n + 5)$
19. $(q - 4)(2q - 5)$
20. $3(5u + 2)(5u - 2)$
21. $-5(y - 4)(2y + 1)$
22. $4pq(3p^4 + 9p^3 + 2)$
23. $3r(r + 7)(r - 2)$
24. $(7m + 4)(7m - 4)$
25. $(8 + t)(8 - t)$
26. $(3a + 4)(3a + 4)$ or $(3a + 4)^2$
27. $(m - 3)(m - 3)$ or $(m - 3)^2$
28. $x = 0, -4$
29. $x = 2, -5/4$
30. $x = 7, -5$
31. $x = -3, 3$
32. $x = 0, 1/2$
33. $x = 9/2, -10/3$
34. -13 and -11, 11 and 13
35. 7 and 24, -12 and -14
36. $b = \pm 2\sqrt{6}$
37. $k = \pm i\sqrt{2}$
38. $w = 1 \pm 3i$
39. $p = -3 \pm \sqrt{10}$
40. $x = \pm 10i$
41. $z = \frac{-1 \pm 2i}{3}$
42. a) 280 feet
b) 244 feet
c) 4.18 seconds
43. $x = -8 \pm 2i\sqrt{5}$
44. $x = 9 \pm i\sqrt{11}$
45. $x = 5 \pm \sqrt{5}$
46. $x = \frac{3 \pm \sqrt{17}}{4}$
47. $x = 1 \pm \sqrt{7}$
48. $x = \frac{1}{2}, -\frac{5}{2}$
49. Discriminant: 0
1 real solution
50. Discriminant: 9
2 real solutions
51. -11
2 imaginary solutions
52. $x = 8, -3$
53. $x = \frac{2 \pm \sqrt{3}}{2}$
54. $x = \frac{1 \pm i\sqrt{13}}{7}$
55. $x = \pm \frac{i\sqrt{2}}{2}$