

Honors Math 3

Unit 4 - Day 5 Homework

Please do your work on a separate sheet of paper. You must show ALL work and attempt ALL problems to receive full credit. Please check your answers BEFORE class!

p.197 #25-31 odd, 39-49 odd

Solve.

25. $(x - 1)(x^2 + x - 2) = 0$ $x = -2, 1$ (DR)

27. $y^2(y - 3)(y^2 - 9) = 0$ $y = -3, 0$ (DR), 3 (DR)

29. $x^4 - 2x^2 + 1 = 0$ $x = -1$ (DR), 1 (DR)

31. $t^6 + 9t^2 = 10t^4$ $t = -3, -1, 0$ (DR), $1, 3$

Find the roots.

39. $(x - 1)^3 - (x - 1)^2 = 0$ $x = 1$ (DR), 2

41. $(x^2 - 4)^3 = 0$ $x = -2$ (TR), 2 (TR)

43. $(x^2 + 1)^2 - 4(x^2 + 1) + 4 = 0$
 $x = -1$ (DR), 1 (DR)

Find all zeros of f . Identify all multiple zeros.

45. $f(x) = (x - 4)^3 - 4(x - 4)$ $x = 2, 4, 6$

47. $f(z) = 9z^4 - 12z^3 + 4z^2$ $z = 0$ (DR), $\frac{2}{3}$ (DR)

49. $f(x) = (x - 1)^4 - 4(x - 1)^3$ $x = 1$ (TR), 5