

EOCT Review #2

For each give 1) the discriminant

2) describe the solutions

3) Solve using Quadratic formula

① $-5x^2 - 15x + 10 = 0$

② $-9x - 1 = -9x^2$

③ $-13x^2 - 9x + 4 = 5 + 2x^2 - x$

④ $11x^2 + 4 = 2 - 7x^2 + 11x$

⑤ $4x - 2 = -3x^2 + 3x$

⑥ $4x^2 - 6x + 2 = 0$

⑦ $10x^2 - 5x + 5 = -25x$

⑧ $7x^2 + x = 12x^2 - 3x + 2$

⑨ $x - x^2 = 1 - 6x^2$

⑩ $12x^2 - 9x + 1 = 10x^2 + 10x + 7$

⑪ $-x^2 + 5x - 9 = 0$

⑫ $x^2 + 2x + 7 = 0$

⑬ $-4x^2 + 6x - 3 = 0$

⑭ $-3x^2 - 5x - 3 = 0$

⑮ $16x - x^2 = -4 - 22x^2$

⑯ $13x^2 - 5 = x + 10x^2 - 8$

⑰ $6x^2 - 7x + 3 = 0$

⑱ $-5x^2 + 10x - 6 = 0$

⑲ $x^2 - x + 1 = 0$

⑳ $2x^2 + 12x + 19 = 0$

㉑ $x + 2x^2 + 1 = -1 - x$

㉒ $7x^2 - 4 - x = 6x^2 - 10$

㉓ $-10x^2 + 16 = 30$

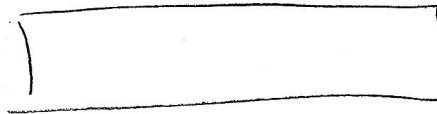
㉔ $2x^2 + 9 = -2x^2$

㉕ $x^2 - 17 = 13 - x^2$

Reminders

① Make sure _____

② to find discriminant



③ If discriminant > 0 (positive)

you have _____

If discriminant $= 0$

you have _____

If discriminant < 0 (negative)

you have _____

③ Quadratic formula:

Factor the expression. If the expression cannot be factored, say so.

1. $x^2 + 4x - 21$

4. $x^2 + 9x + 14$

7. $x^2 + 3x + 1$

10. $3x^2 + 7x + 2$

13. $6x^2 - 13x + 2$

16. $x^2 + 16x + 64$

19. $4x^2 + 4x + 1$

22. $x^2 + 8x - 5$

2. $x^2 + 6x - 2$

5. $x^2 - 11x + 28$

8. $2x^2 - 5x - 3$

11. $2x^2 + 5x + 3$

14. $15x^2 - 14x + 3$

17. $x^2 - 6x + 9$

20. $9x^2 - 12x + 4$

23. $4x^2 + 7$

Factor the expression.

25. $2x^2 - 4x - 30$

28. $4x^2 + 14x + 6$

31. $12x^2 - 3$

26. $-x^2 + 10x - 21$

29. $6x^2 - 33x + 15$

32. $-8x^2 + 24x - 18$

Solve the equation.

34. $x^2 + x - 30 = 0$

37. $2x^2 + 7x - 4 = 0$

40. $3x^2 - 8x + 5 = 0$

43. $25x^2 = 16$

45. $8x^2 + 5x - 4 = 2x^2 - 8x + 1$

35. $x^2 + 10x + 9 = 0$

38. $3x^2 + 8x - 3 = 0$

41. $25x^2 + 20x + 4 = 0$

44. $2x^2 - x = 21$

Simplify

1. $(4x^3 + 2x^2 + 1) + (x^2 + x - 5)$

2. $(9x^2 - 3x - 4) - (x^2 + 2x - 1)$

3. $2x(x^2 + 3x - 4)$

4. $(x + 6)(x - 6)$

5. $(x - 3)(x^2 + x - 7)$

2. $(x^4 - x + 3) + (x^3 - x^2 - 3x + 4)$

4. $(-3x^3 + 2x^2 - x + 1) - (x^3 + x + 3)$

6. $x(x^4 + 2x^2 - 3)$

8. $(x + 14)(x - 14)$

10. $(x + 1)(x^2 + 3x + 1)$