

Trig Chapter 2 Practice Test 1 2019-20

Name: _____

Time Start: _____ Finish: _____ Total Time = _____

Factor each into the product of two binomials. If the expression cannot be factored, write "NOT FACTORABLE."

_____ 1. $x^2 - 7x + 12$

_____ 2. $x^2 - 25$

_____ 3. $3x^2 + 32x + 20$

_____ 4. $8x^2 + 39x - 5$

_____ 5. $5x^2 + 25x + 30$

_____ 6. $4x^2 + 12xy + 9y^2$

_____ 7. $6x^2 + 19x + 8$

_____ 8. $6x^2 + 23x + 10$

Factor completely.

_____ 9. $x^3 - 27$

_____ 10. $27n^3 + 8$

_____ 11. $8n^3 - 27y^3$

_____ 12. $27n^3 + 125y^3$

_____ 12. $5n^2y + 20n^3y^2$

_____ 13. $27n^3y - 18ny$

_____ 14. $8n^3xy^2 - 10nxy^3$

_____ 15. $100n^3b^{10} + 125n^3b^9$

_____ 16. $2x^3 - 5x^2 + 6x - 15$

_____ 17. $10k^3 - 5k^2 + 8k - 4$

_____ 18. $20b^3 - 16b^2 + 5b - 4$

_____ 19. $9x^3 - 3x^2 + 3x - 1$

Simplify.

_____ 20. $\frac{n^2 + 7n + 12}{n^2 + 9n + 20}$

_____ 21. $\frac{n^2 - 36}{n^2 - 11n + 30}$

_____ 22. $\frac{n^2 + 10n + 21}{n^2 + 4n + 3}$

_____ 23. $\frac{2n^2 + 21n + 10}{3n^2 + 31n + 10}$

In 24 and 25, tell what x cannot be in the expressions.

_____ 24. $\frac{4x - 5}{x - 6}$

_____ 25. $\frac{x - 4}{x^2 - 13x + 30}$

26. $a - 3 \overline{) a^2 + a - 12}$

27. $a - 5 \overline{) a^2 + 2a - 35}$

28. $2a - 7 \overline{) 4a^2 - 2a - 35}$

29. $a + 7 \overline{) a^2 + 4a - 1}$

30. $a + 1 \overline{) a^2 + 8a - 3}$

31. $a - 2 \overline{) a^2 + 3}$

How many possibilities exist?

_____ 32. $6n^2 + \square n + 20$

_____ 33. $15n^2 + \square n + 25$

_____ 34. $8n^2 + \square n + 32$

_____ 35. $3n^2 + \square n + 2$

_____ 36. $9n^2 + \square n + 16$

_____ 37. $4n^2 + \square n + 25$

_____ 38. $12n^2 + \square n + 50$

_____ 39. $20n^2 + \square n + 100$

_____ 40. $8n^2 + \square n + 12$