

Trig Chapter 2 Practice Test 1

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

Use the busting B method to factor the following into the product of two binomials.

_____ 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. $a - 3 \sqrt{a^2 + a - 12}$

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

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

Solve the following equations by factoring. Circle your answers.

29. $x^2 + x - 20 = 0$

30. $x^2 + 13x + 30 = 0$

31. $10x^2 + 23x + 12 = 0$

Use the quadratic equation to solve for x. The quadratic equation is $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$.

32. $x^2 + 16x + 48 = 0$

33. $10x^2 + 27x - 28 = 0$

Solve for x. Put your answer in the blank to the left of the question.

_____ 34. $x(3x - 2)(2x + 1)(5x - 10) = 0$

_____ 35. $x^3 + 3x^2 + 2x = 0$