Trig Chapter 1 Practice Test 1

Name _____

Simplify. Display answers without negative exponents.

_____ 1. $\dfrac{n^7 y^3}{n^2 y^6}$

_____ 2. $\left(\dfrac{2}{3}\right)^{-3}$

_____ 3. $\dfrac{6a^3b^5c}{9a^6b^3c^3}$

_____ 4. $\left(3a^{-5}\right)^2$

_____ 5. $\dfrac{y^3e^{-5}s^3}{y^7e^2s^{-4}}$

_____ 6. $\left(\dfrac{a^3}{a^{-2}}\right)^{-2}$

_____ 7. $\left(3s^{-3}t^5u^{-1}d^2\right)^{-2}$

_____ 8. $\left(\dfrac{x^4y^{-1}}{5x^3yz^{-5}}\right)^{-2}$

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

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

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

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

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

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

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

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. $a^2+6a+5\overline{)a^3+8a^2+17a+10}$