Trig 1-5 Simplifying Expressions and Negative Exponents

Name: _____ Time› Start: _____ Finish: _____ Total Time = _____

Simplify. Display answers without negative exponents.

_____ 1. $\frac{n^4 y^3}{n^2 y^5}$

_____ 2. $\frac{4a^3b^5c}{6a^2b^3c}$

_____ 3. $\frac{-8ny}{10ny^3}$

_____ 4. $\frac{n^6}{y^{10}} \bullet \frac{y^{12}}{n^5}$

_____ 5. $\frac{a^2bc^3d}{ab^4cd^2}$

_____ 6. $n^{-4} \bullet n^7$

_____ 7. $n^{-3} \bullet y^5 \bullet n^{-2} \bullet y^{-3}$

_____ 8. $\frac{n^{-3}a}{n^2a^{-2}}$

_____ 9. $\frac{c^3w^{-5}h^{-1}}{c^{-1}w^{-2}h}$

_____ 10. $\frac{y^3e^{-5}s^3}{y^7e^2s^{-4}}$

_____ 11. $\left(\frac{2}{3}\right)^{-1}$

_____ 12. $\left(\frac{2}{5}\right)^{-2}$

_____ 13. $\left(\frac{a^3}{a^{-2}}\right)^2$

_____ 14. $\left(\frac{a^3}{a^{-2}}\right)^{-2}$

_____ 15. $\left(3a^{-5}\right)^2$

_____ 16. $\left(3a^{-5}\right)^{-2}$

_____ 17. $\left(\frac{a^{-2}b^2}{ab^{-4}c}\right)^{-2}$

_____ 18. $\left(\frac{2x^4y^{-1}}{5x^3yz}\right)^{-2}$

_____ 19. $\left(2s^{-3}t^2u^{-1}d\right)^{-3}$

_____ 20. $(-1)^{-1}$

SAT Questions

_____ 21. Which of the following is equal to $(7^8 \times 7^9)^{10}$?

A. 7^{27} B. 7^{82} C. 7^{170} D. 49^{170} E. 49^{720}

_____ 22. If a certain number is doubled and the result is increased by 7, the number obtained is 19. What is the original number?

_____ 23. If the average (arithmetic mean) of x, 5x, and 6x is 8, what is the value x?

A. 1 B. 2 C. 3 D. 4 E. 5

_____ 24. If $4(x + 3) = 15$, then what is the value of $4x + 3$?

_____ 25. If *b* represents a positive integer, which of the following expressions necessarily represents an even integer?

A. $2b$ B. $b + 2$ C. $2b + 1$ D. $3b$ E. $2b - 1$