Name: _____ Date: _____ Period: _____

5.5 Negative Exponents DAY ONE CYU

☑ *Use when you get it right all by yourself*

S *Use when you did it all by yourself, but made a silly mistake*

H *Use when you could do it alone with a little help from teacher or peer*

G *Use when you completed the problem in a group*

X *Use when a question was attempted but wrong (get help)*

N *Use when a question was not even attempted*

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Law of Negative Exponents	1 - 4	5 - 10	11 - 25
All the Laws of Exponents Mixed			26 - 39

Simplify each expression. Write each result using positive exponents only. Show all work for credit.

1. 4^{-3}
2. 6^{-2}
3. $(-3)^{-4}$
4. $(-3)^{-5}$
5. $7x^{-3}$
6. $(7x)^{-3}$
7. $\left(\frac{1}{2}\right)^{-5}$
8. $\left(\frac{1}{8}\right)^{-2}$
9. $\left(-\frac{1}{4}\right)^{-3}$
10. $\left(-\frac{1}{8}\right)^{-2}$
11. $3^{-1}+5^{-1}$
12. $4^{-1}+4^{-2}$
13. $\left(\frac{1}{p^{-3}}\right)$
14. $\left(\frac{1}{q^{-5}}\right)$
15. $\left(\frac{p^{-5}}{q^{-4}}\right)$
16. $\left(\frac{r^{-5}}{s^{-2}}\right)$
17. $\left(\frac{x^{-2}}{x}\right)$
18. $\left(\frac{y}{y^{-3}}\right)$
19. $\left(\frac{z^{-4}}{z^{-7}}\right)$
20. $\left(\frac{x^{-4}}{x^{-1}}\right)$
21. $3^{-2}+3^{-1}$
22. $4^{-2}-4^{-3}$
23. $\left(\frac{-1}{p^{-4}}\right)$
24. $\left(\frac{-1}{y^{-6}}\right)$
25. $-2^{0}-3^{0}$

Simplify each expression. Write each result using positive exponents only.

26. $\frac{x^2x^5}{x^3}$

27. $\frac{p^2p}{p^{-1}}$

28. $\frac{(m^5)^4m}{m^{10}}$

29. $\frac{p}{p^{-3}p^{-5}}$

30. $(z^5x^5)^{-3}$

31. $\frac{(y^4)^2}{y^{12}}$

32. $\frac{(x^2)^5}{(x^4)^3}$

33. $\frac{27r^4}{3r^6}$

34. $\frac{15a^4}{-15a^5}$

35. $\frac{-5x^4y^5}{15x^4y^2}$

36. $(-5a^4b^{-7})(-a^{-4}b^3)$

37. $(4^{-1}x^5)^{-2}$

38. $\left(\frac{a^5b}{a^7b^{-2}}\right)^{-3}$

39. $\frac{(-3x^2y^2)^{-2}}{(xyz)^{-2}}$

CYU Reflection: *How far can you go: basic, intermediate, or advanced?*

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yours elf.