5.5 Negative Exponents DAY ONE CYU ☐ Use when you get it right all by yourself

 ${m S}$ Use when you did it all by yourself, but made a silly mistake HUse when you could do it alone with a little help from teacher or peer

6 Use when you completed the problem in a group

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

NUse 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.

$$4.(-3)^{-5}$$

$$5.7x^{-3}$$

$$7. \left(\frac{1}{2}\right)^{-5}$$

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.
$$\left(\frac{-1}{p^{-1}}\right)$$

$$24. \left(\frac{-1}{y^{-6}}\right)$$

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

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

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

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

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

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

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

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

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

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

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

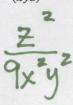
$$35. \, \frac{-5x^4y^5}{15x^4y^2}$$

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.

