6.6 Zero and Negative Exponents - Day 2

Negative exponents are like: an elevator button

Examples:

1. $4n^{-2}$ → $\frac{4}{n^2}$
2. a^6b^{-3} → $\frac{a^6}{b^3}$
3. $-5x^{-2}y^7$ → $\frac{-5y^7}{x^2}$
4. $\frac{10}{a^{-3}}$ → $10a^3$
5. $\frac{m^{-3}}{n^{-6}}$ → $\frac{n^6}{m^3}$
6. $\frac{3a^{-2}}{c^{-5}}$ → $\frac{3c^5}{a^2}$

7. $5yx^{-4}$ → $\frac{5y}{x^4}$
8. $\frac{h^{-7}}{g^{-3}}$ → $\frac{g^2}{h^7}$
9. $6uv^{-2}$ → $\frac{6u}{v^2}$
10. 4^{-2} → $\frac{1}{4^2} = \frac{1}{16}$
11. $\frac{-4r^{-5}}{7t^{-4}}$ → $\frac{-4t^4}{7r^5}$
12. $\frac{1}{5^{-6}}$ → 5^6
13. $\frac{6c^2}{3d^{-4}}$ → $\frac{6c^2d^4}{3}$ → $2c^2d^4$
14. $-9a^5b^{-3}$ → $\frac{-9a^5}{b^3}$
15. $\frac{w^{-3}y^3}{x^6z^{-2}}$ → $\frac{y^3z^2}{x^6w^3}$

***Operations and negative exponents: Operate as usual.

↳ generally operate before ELIMINATING negative exponents

★ If a fraction - get rid of negative exponents first

16. $(x^5)(x^{-2})$ → x^3
17. $\frac{x^{-6}}{x^{-9}}$ → $\frac{x^9}{x^6} = x^3$
18. $(x^3)^{-2}$ → x^{-6} → $\frac{1}{x^6}$
19. $5^{-6}(5^{-4})$ → 5^{-10} → $\frac{1}{5^{10}}$
20. $(8^{-2})^{-5}$ → 8^{10}
21. $5^0 + 4^{-2}$ → $1 + \frac{1}{4^2}$ → $1 + \frac{1}{16}$ → $1\frac{1}{16}$

HOMEWORK

Worksheet - HW 6.6 Day 2