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Name: Key
8A; Algebra 1

Date:_____
Period_____

Homework

Transform each given expression into an equivalent expression involving a **positive** exponent. Simplify where necessary.

1) $10^{-4} = \frac{1}{10^4} = \boxed{\frac{1}{10,000}}$

2) $r^{-3} = \boxed{\frac{1}{r^3}}$ $r \neq 0$

3) $10^0 = \boxed{1}$

4) $(-4)^0 = \boxed{1}$

5) $-4^0 = \boxed{-1}$

$-1 \cdot 4^0$

$-1 \cdot 1$

-1

6) $3^{-2} = \frac{1}{3^2} = \boxed{\frac{1}{9}}$

7) $7^0 + 6^{-2} = \boxed{1\frac{1}{36}}$

$1 + \frac{1}{6^2}$

$1 + \frac{1}{36}$

$1\frac{1}{36}$

8) $4(10)^{-2} = \boxed{\frac{1}{25}}$

$4 \cdot 10^{-2}$

$4 \cdot \frac{1}{10^2}$

$4 \cdot \frac{1}{100}$

$\frac{4}{100} = \frac{1}{25}$

9) $3^{-4} \cdot 3^{-2} = \boxed{\frac{1}{729}}$

$\frac{1}{3^4} \cdot \frac{1}{3^2}$

$\frac{1}{81} \cdot \frac{1}{9}$

$\frac{1}{729}$

10) $m^{-6} = \boxed{\frac{1}{m^6}}$ $m \neq 0$

11) $\left(\frac{1}{2}\right)^0 + 3^{-3} = \boxed{1\frac{1}{27}}$

$\left(\frac{1}{2}\right)^0 + 3^{-3}$

$1 + \frac{1}{3^3}$

$1 + \frac{1}{27}$

$1\frac{1}{27}$

12) $-2 \cdot 4^{-1} = \boxed{-\frac{1}{2}}$

$-2 \cdot 4^{-1}$

$-2 \cdot \frac{1}{4}$

$\frac{-2}{4} = -\frac{1}{2}$

**Challenge: $7x^0 - (6x)^0$

$7 \cdot x^0 - (6x)^0$

$7 \cdot 1 - 1$

$7 - 1$

$\boxed{6}$