$\qquad$ Hour: $\qquad$ Standard: 8.EE. 1 Know and apply the properties of integer exponents to generate equivalent numerical expressions.
1.) $\frac{4 x^{4}}{\left(x^{-1}\right)^{3}}$
2.) $\left(b^{-2}\right)^{2} \cdot\left(b^{4}\right)^{3}$

Directions: Write three equivalent expressions to the given expression using exponents.
3.) $x^{3} y^{4}$


Name: $\qquad$ Hour: $\qquad$ Standard: 8.EE. 1 Know and apply the properties of integer exponents to generate equivalent numerical expressions.

Directions: Simplify each problem below. Show work as necessary. Circle your answer.
1.) $\frac{4 x^{4}}{\left(x^{-1}\right)^{3}} \quad$ 2.) $\left(b^{-2}\right)^{2} \cdot\left(b^{4}\right)^{3}$

Directions: Write three equivalent expressions to the given expression using exponents.
3.) $x^{3} y^{4}$
$\qquad$ Hour: $\qquad$

## Directions: Simplify the exponential expression.

Don' $\overline{\text { forget }} \overline{+0} \overline{\text { assess Yourself!? }}$
1.) $(a+b)^{2}(a+b)^{-3}$
2.) $\frac{\left(2 a^{7}\left(3 a^{2}\right)\right.}{6 a^{3}}$

Directions: Complete the equation by filling the box with the correct number.
3.) $\left(3 x^{3} y^{\square}\right)^{3}=27 x^{9}$
4.) $\left(m^{2} n^{3}\right)^{\square}=\frac{1}{m^{6} n^{9}}$


Name: $\qquad$ Hour: $\qquad$ Standard: A-SSE.3c. Use the properties of exponents to transform expressions for exponential functions.

Directions: Simplify the exponential expression.
1.) $(a+b)^{2}(a+b)^{-3}$
2.) $\frac{\left(2 a^{7}\left(3 a^{2}\right)\right.}{6 a^{3}}$

Directions: Complete the equation by filling the box with the correct number.
3.) $\left(3 x^{3} y^{\square}\right)^{3}=27 x^{9}$
4.) $\left(m^{2} n^{3}\right)^{\square}=\frac{1}{m^{6} n^{9}}$


Name: $\qquad$ Hour: $\qquad$ Standard: 8.EE.4 Perform operations with numbers expressed in scientific notation.

Directions: Solve using operations with scientific notation. Show work as necessary. Circle your answer.
1.) $\left(6 \times 10^{3}\right)\left(3.3 \times 10^{2}\right)$
2.) $\left(5.02 \times 10^{-6}\right)-\left(4.3 \times 10^{-6}\right)$
3.) The following scientific notations represent three test tube volumes: $1 \times 10^{-2}, 2.6 \times 10^{-2}$, and $4 \times 10^{-3}$. Find the sum of the three volumes.


Name: $\qquad$ Hour: $\qquad$
Standard: 8.EE.4 Perform operations with numbers expressed in scientific notation.

Directions: Solve using operations with scientific notation. Show work as necessary. Circle your answer.
1.) $\left(6 \times 10^{3}\right)\left(3.3 \times 10^{2}\right)$
2.) $\left(5.02 \times 10^{-6}\right)-\left(4.3 \times 10^{-6}\right)$
3.) The following scientific notations represent three test tube volumes: $1 \times 10^{-2}, 2.6 \times 10^{-2}$, and $4 x 10^{-3}$. Find the sum of the three volumes.

