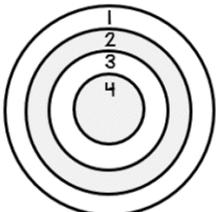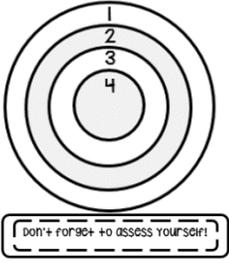**/4**

Don't forget to assess yourself!

Directions: Simplify each problem below. Show work as necessary. Circle your answer.

1.) $\dfrac{4x^4}{(x^{-1})^3}$

2.) $(b^{-2})^2 \cdot (b^4)^3$

Directions: Write three equivalent expressions to the given expression using exponents.

3.) $x^3 y^4$

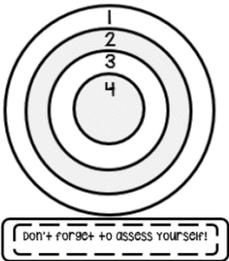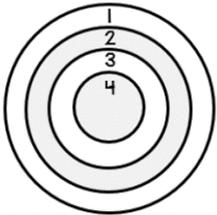**Directions: Simplify the exponential expression.**

1.) $(a + b)^2(a + b)^{-3}$

2.) $\dfrac{(2a^7(3a^2)}{6a^3}$

Directions: Complete the equation by filling the box with the correct number.

3.) $(3x^3y^\square)^3 = 27x^9$

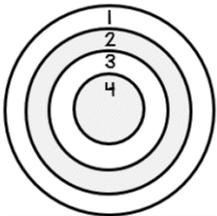4.) $(m^2n^3)^\square = \dfrac{1}{m^6n^9}$

Directions: Solve using operations with scientific notation. Show work as necessary.
Circle your answer.

1.) $(6 \times 10^3)(3.3 \times 10^2)$

2.) $(5.02 \times 10^{-6}) - (4.3 \times 10^{-6})$

3.) The following scientific notations represent three test tube volumes: 1×10^{-2}, 2.6×10^{-2}, and 4×10^{-3}. Find the sum of the three volumes.