* Evaluate the expression. Write your answer using exponents and as a simplified fraction. NO DECIMALS!

1. $5^{-5} \cdot 5^{8}$
2. 6^{-3}
3. $(3^{2})^{6}$
4. $\frac{4^{50}}{4^{49}}$

* Simplify the expression.

5. $(4^{0})(7x)$
6. $(3xy^{2})^{3} \cdot (-3x^{2}y)^{2}$

* Tell whether the function represents exponential growth or exponential decay.

7. $y = 4^{x}$
8. $y = (\frac{1}{4})^{x}$

* Identify the growth or decay factor & the y-intercept of each exponential function.

9. $y = 4(\frac{1}{3})^{x}$
10. $y = 3(4)^{x}$

* Graph the exponential function. Use a table!

11. $y = 3(\frac{1}{3})^{x}$

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