

Exponential Function Review

What is the y-intercept of each equation and what is the multiplier? Then evaluate the function for the given value of x.

a. $y = 3^x$

y-intercept:

multiplier:

When $x=2$, $y=$ _____

b. $y = 3(2)^x$

y-intercept:

multiplier:

When $x = -1$, $y=$ _____

c. $y = -4(5)^x$

y-intercept:

multiplier:

When $x=2$, $y=$ _____

d. $y = 0.5^x$

y-intercept:

multiplier:

When $x = -3$, $y=$ _____

e. $y = \frac{1}{3}(6)^x$

y-intercept:

multiplier:

When $x=3$, $y=$ _____

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

y-intercept:

multiplier:

When $x = \frac{3}{2}$, $y=$ _____

g. $y = 10000(0.5)^x$

y-intercept:

multiplier:

When $x=4$, $y=$ _____

h. $y = \frac{3}{2}(10)^x$

y-intercept:

multiplier:

When $x=5$, $y=$ _____

Simplify the expression. Write your answer using only positive exponents.

1. $3^2 \cdot 3^4$

2. $(k^4)^{-3}$

3. $\left(\frac{4X^2}{3Y^5}\right)^3$

4. $\left(\frac{2X^0}{4X^{-2}Y^4}\right)^2$

Evaluate the expression.

5. $\sqrt[3]{27}$

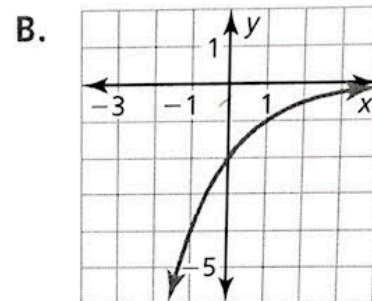
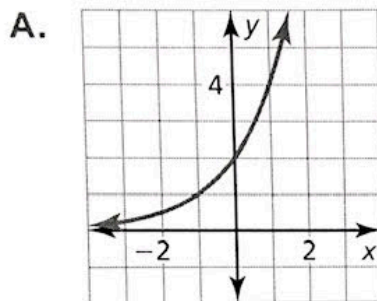
6. $\left(\frac{1}{16}\right)^{\frac{1}{4}}$

7. $512^{\frac{2}{3}}$

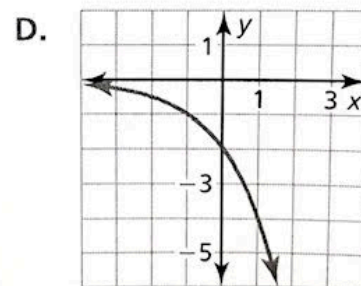
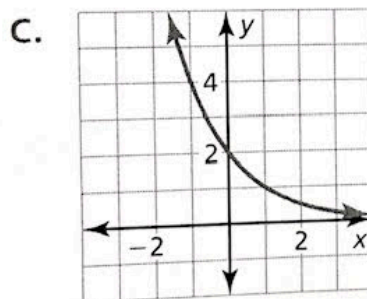
8. $(\sqrt{4})^5$

Match the function with its graph.

9. $y = -2(2)^x$



10. $y = 2(2)^x$



11. $y = 2(0.5)^x$

12. $y = -2(0.5)^x$