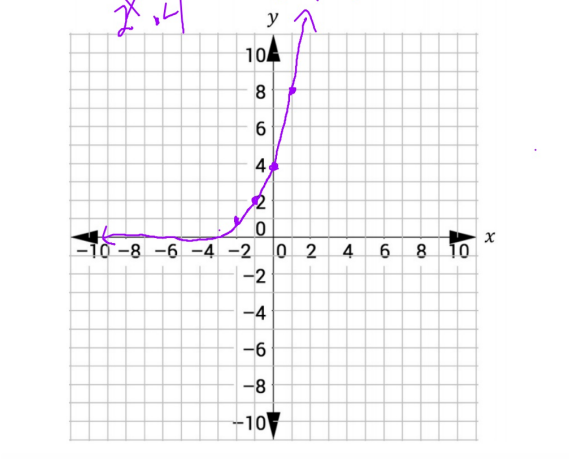
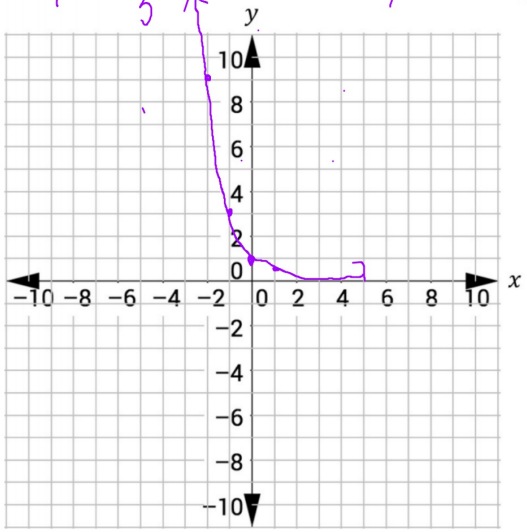
Sometimes we can use the properties of exponents to easily sketch exponential functions.

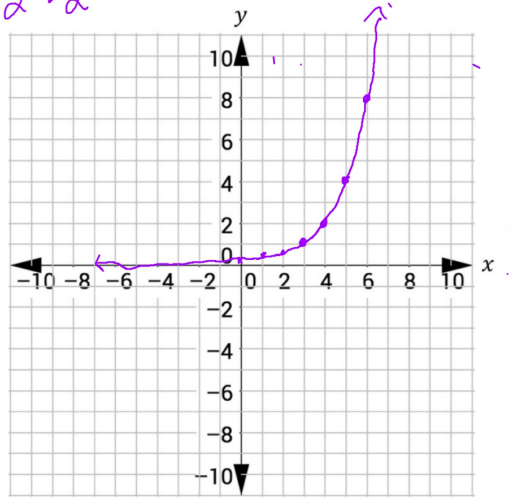
How can we use the properties of exponents to sketch the graph of $y = 2^{x+2}$?



1. Use the properties of exponents to sketch the graph of $y = 3^{-x}$.



2. Use the properties of exponents to sketch the graph of $y = 2^{x-3}$.



BEAT THE TEST!

1. The graph that represents the function $f(x) = -3 \cdot 2^x$ has

a y-intercept of
- (●) $(0, -3)$.
- ( ) $(0, 2)$.

The graph is
- ( ) increasing
- (●) decreasing

by a common ratio of 2, is decreasing as

- (●) x increases,
- ( ) x decreases,

and approaches 0 as
- ( ) x increases.
- (●) x decreases.

2. Which of the following have the same graphic representation as the function $f(x) = 8 \cdot 2^x$? Select all that apply.

- [ ] $y = (2^x)^3$
- [ ] $y = 24^x$
- [x] $y = 2^{x+3}$
- [ ] $y = 2 \cdot 2^{2x}$
- [x] $y = 4 \cdot 2^{x+1}$