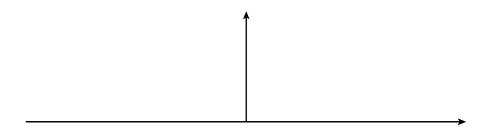
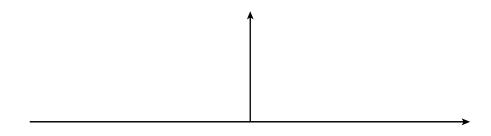
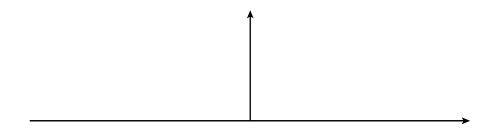
1. Sketch the graph of $f(x) = 2^x$ by plotting points at x = -2, -1, 0, 1, 2.



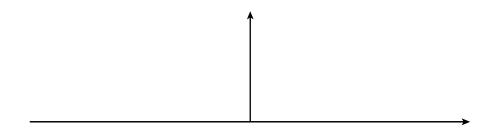
2. Sketch the graph of $f(x) = 3^x$ and $g(x) = 2^x$ on the same axes for $-2 \le x \le 2$.



3. Sketch the graph of $f(x) = 2^x$ and $g(x) = 2^{-x}$ on the same axes.



4. Sketch the graphs of $f(x) = 2^x$, $g(x) = 2^{2x}$ and $h(x) = 4^x$ on the same axes for $-2 \le x \le 2$.



- **5.** I injest a 100mg aspirin at noon. Asperin in the body, at this dosage, has a half life of 3 hours. How much asperin is in my body at:
 - a) 6pm
 - b) 3pm
 - c) 1pm

d) 4:45pm

6. Find a function r(t) that describes the amount of asperin in my body in the previous problem where t is measured in hours since noon and r is in milligrams.

7. A population of e coli starts with 500 cells at time t = 0 hours and doubles every three hours. Find a function P(t) that describes the population size, where t is measured in hours and P is measured in number of cells.

8. A population of Caribou is growing by 20% per year and starts with 1000 animals at time t = 2010. Find a function P(t) that describes the population size where t is measured in calendar years and P is measured in the number of animals.