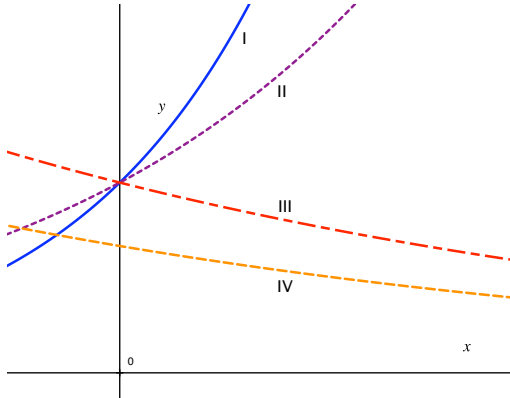


Math 111 Worksheet #6
October 16, 2007

1. In the region of Western Hudson Bay of Canada, the polar bear population in 1987 was estimated to be 1200. In 2007, it was estimated to be 950. Let t be the number of years after 1987.
- (a) Assuming the population P is decreasing exponentially, find a formula giving P as a function of t .
 - (b) According to your formula, what is the percentage change in the population per year?
 - (c) What does your formula predict for the population in 2017? In 2047? In 2087?
2. Match the following graphs with the possible equations.



(a) $3(1.25)^x$

(b) $2(.9)^x$

(c) $3(1.5)^x$

(d) $3(.9)^x$