3.3 #14

The lower the graph, the smaller the growth factor.

#16 (a) \( f(0) = 1000 \); this is the population now; \( f(10) = 1480 \); this is the population 10 yrs from now.

(b) Population will reach 2500 in 23 yrs.

(c) All of them are positive.

(b) Only \( b \) must be between 0 and 1.

(c) In addition to \( b \), \( a, c \) and \( p \) could be between 0 and 1.

(d) \( a \) and \( c \)

(e) \( d \) and \( f \) could be equal.

#28 \( f(x) = 8 - 2^x \) \( y = 8 \) is an asymptote.

#32 (a) (b) \( W = 4589 (1.3177)^t \)

(c) Data indicate 31.77% annual growth.