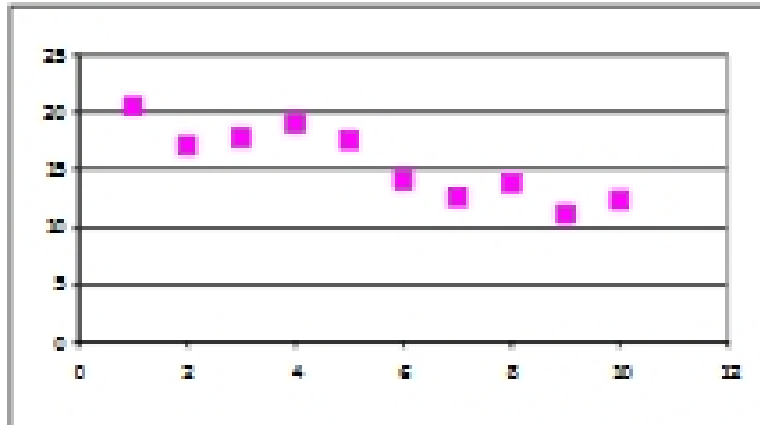
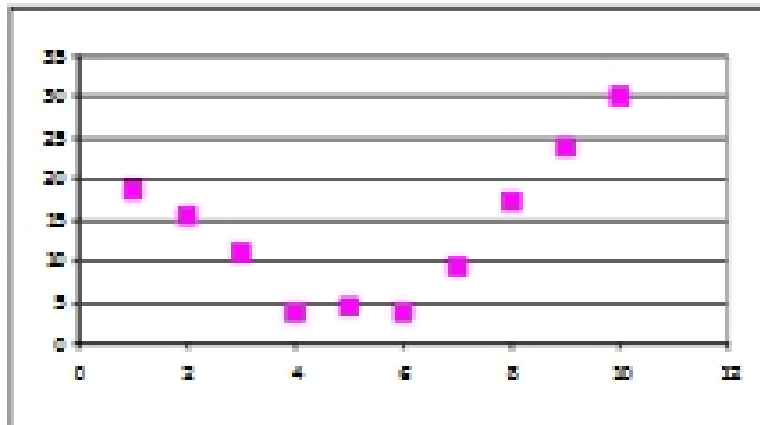


20. Choose two reasonable models for the following data, and explain why you chose each model.

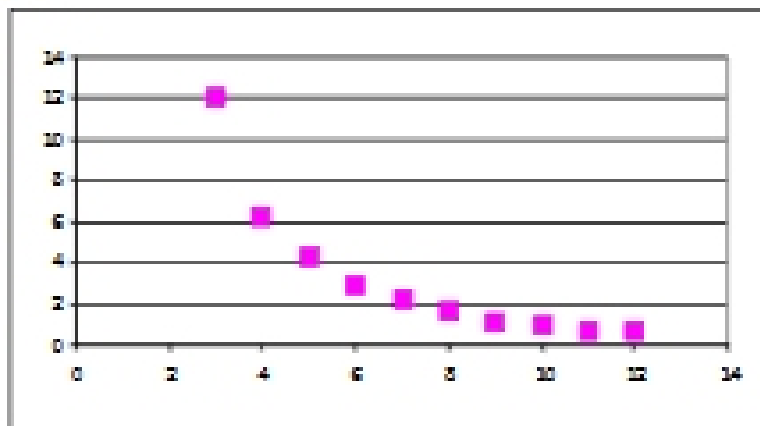
(a.)



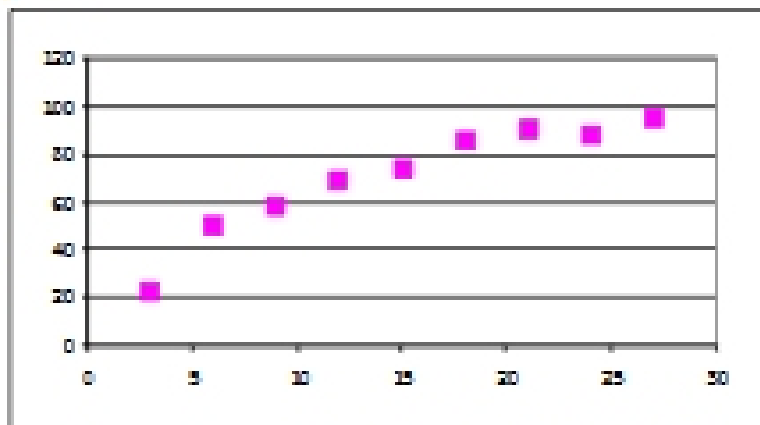
(b.)



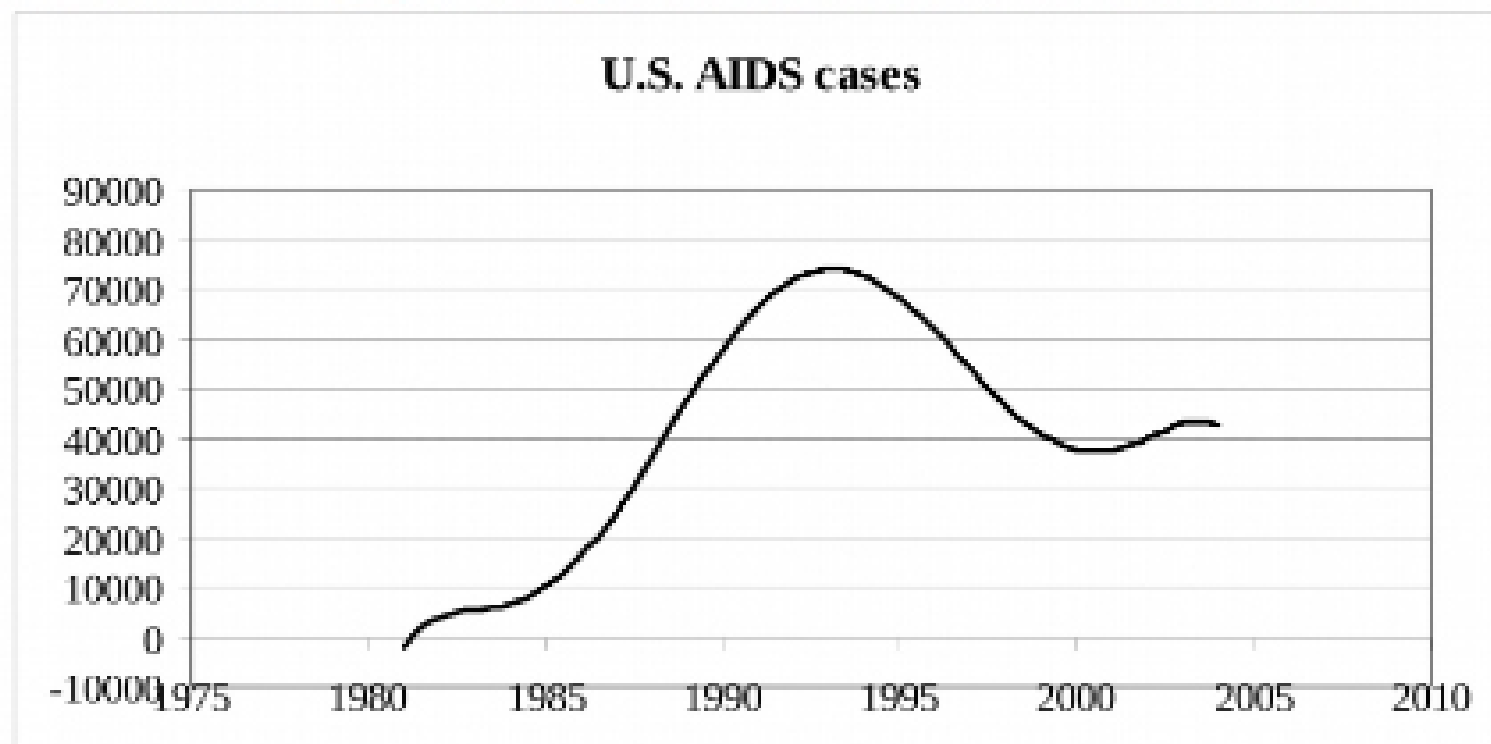
(c.)



(d.)



21. Consider this graph showing the number of cases of AIDS in the US.



(a.) Find the change in the number of AIDS cases between 1985 and 1990. between 1995 and 2000.

(b.) Find the average rate of change in the number of AIDS cases between 1985 and 1990. Between 1995 and 2000.

(c.) Find the percent change in the number of AIDS cases between 1985 and 1990. Between 1995 and 2000.

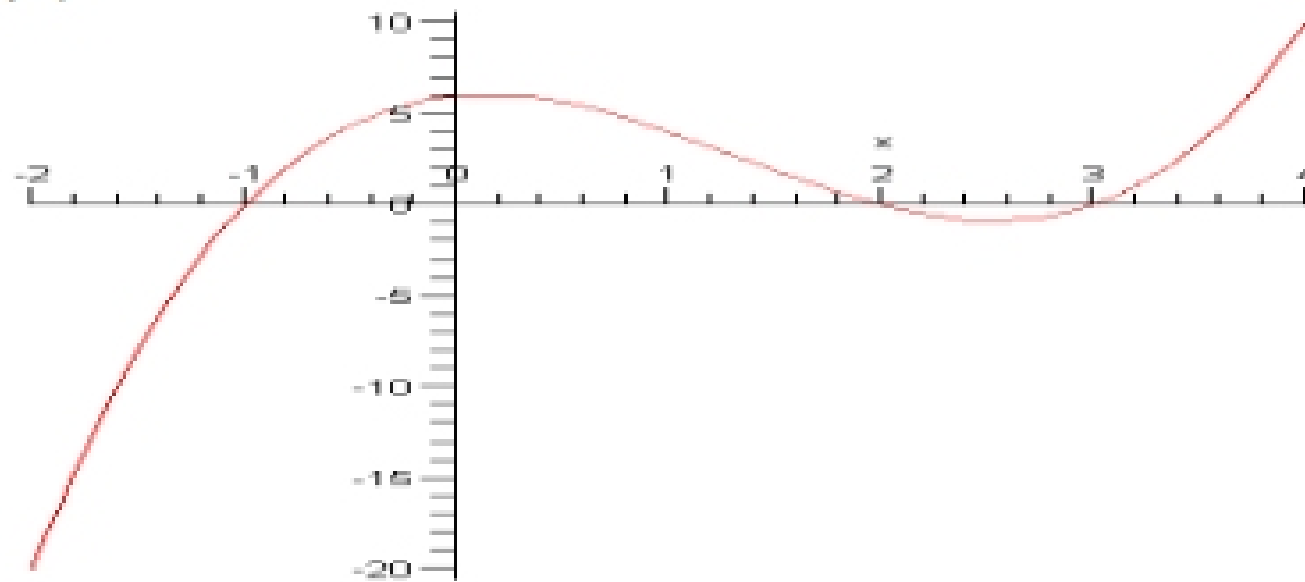
(d.) Find the percent rate of change in the number of AIDS cases between 1985 and 1990. Between 1995 and 2000.

22. Here is a table of values for a function  $f(t)$ . Use some of this information along with your calculator to estimate the derivative of  $f(t)$  at  $t=2$ . Can you see the pattern that would give you the exact limit?

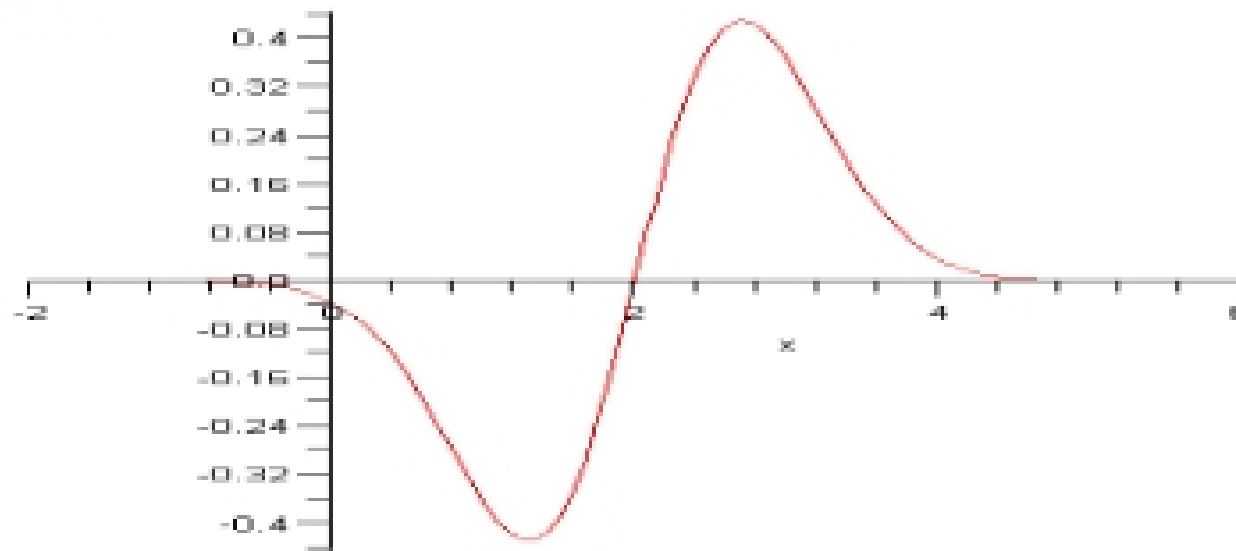
t	f(t)
0	0.000000000000
0.9	0.729000000000
0.99	0.970299000000
0.999	0.997002999000
1	1.000000000000
1.001	1.003003001000
1.01	1.030301000000
1.1	1.331000000000
1.9	6.859000000000
1.99	7.880599000000
1.999	7.988005999000
2	8.000000000000
2.001	8.012006001000
2.01	8.120601000000
2.1	9.261000000000
3	27.000000000000

23. For the following graphs, state the regions where (a) the function is positive, (b) the function is negative, (c) the function's zeros, (d) the function is increasing, (e) the function is decreasing, (f) the function's local maximum(s), (g) the function's local minimum(s), (h) the function is concave up, (i) the function is concave down, (j) the function's inflection points.

(A.)



(B.)



(C.)

