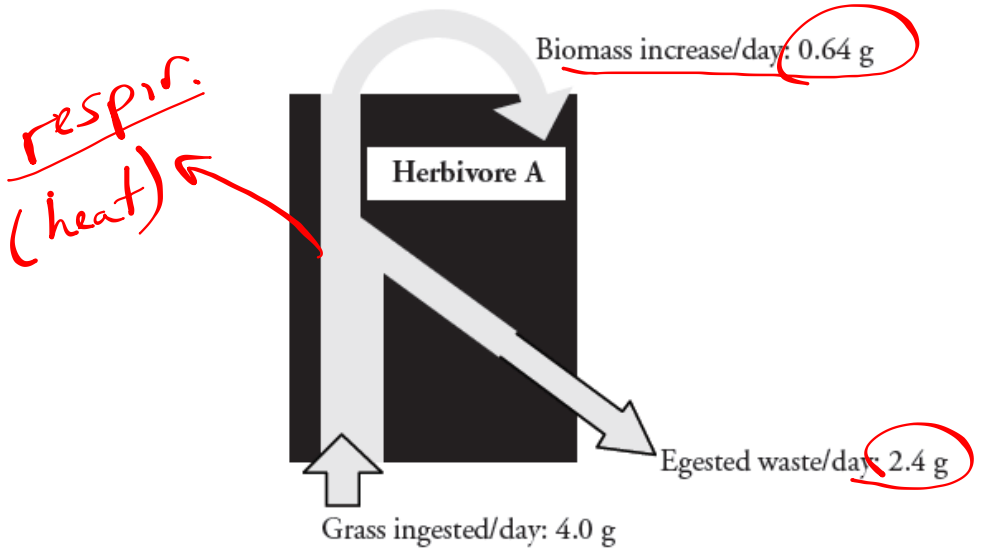
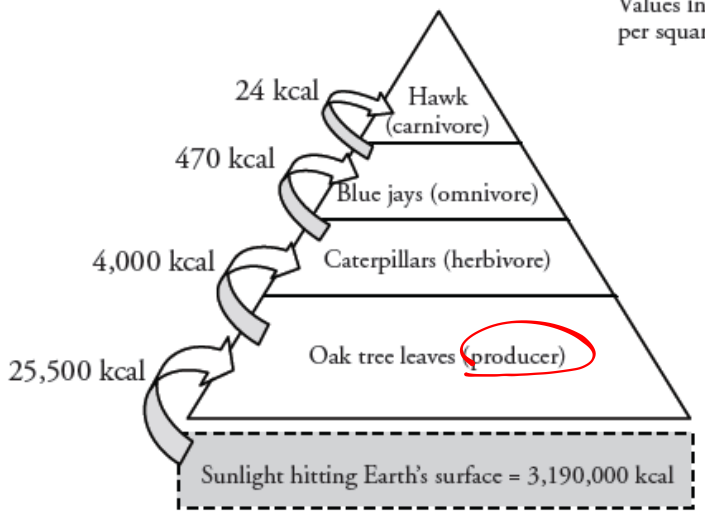
Model 1 – Food Conversion in a Herbivore



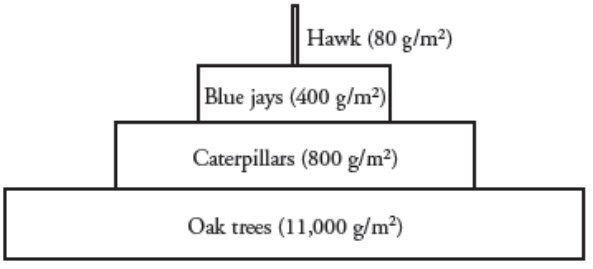
Pyramid of Energy

Values in the pyramid are per square meter per year.

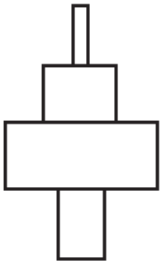


Model 3 – Pyramid of Biomass

Pyramid X



Pyramid Y



Heron (20 g/m²)

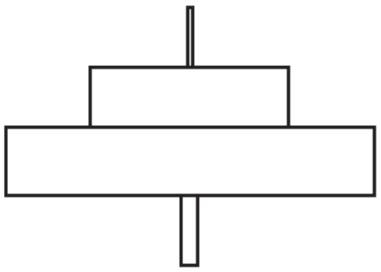
Perch (100 g/m²)

Zooplankton (210 g/m²)

Phytoplankton (40 g/m²)

Model 2 – Pyramid of Numbers

Pyramid A



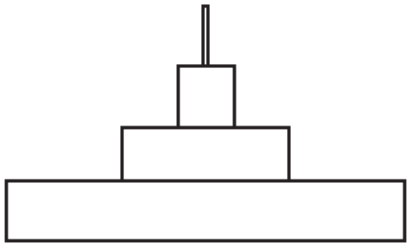
1 hawk

20 blue jays

1000 caterpillars

2 oak trees

Pyramid B



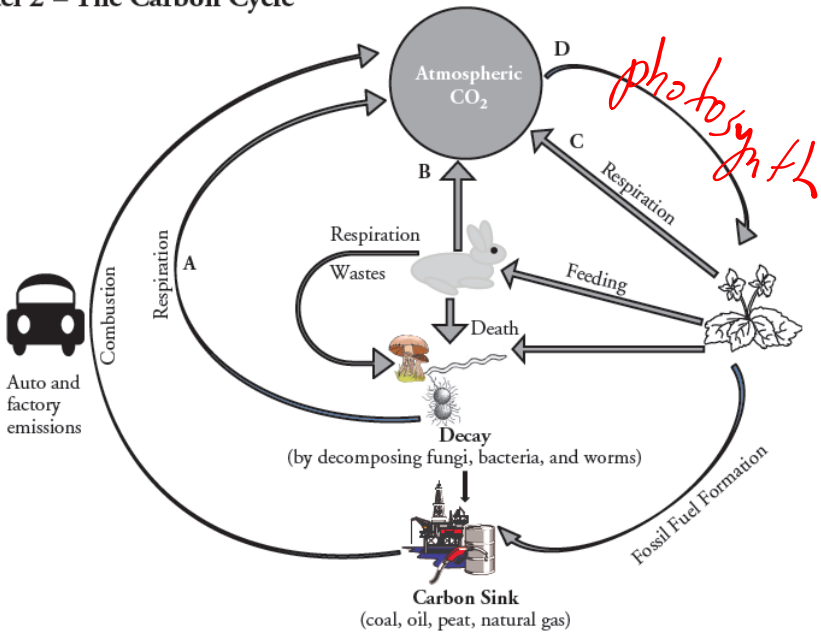
1 hawk

20 blue jays

1000 caterpillars

100,000 oak leaves

Model 2 – The Carbon Cycle



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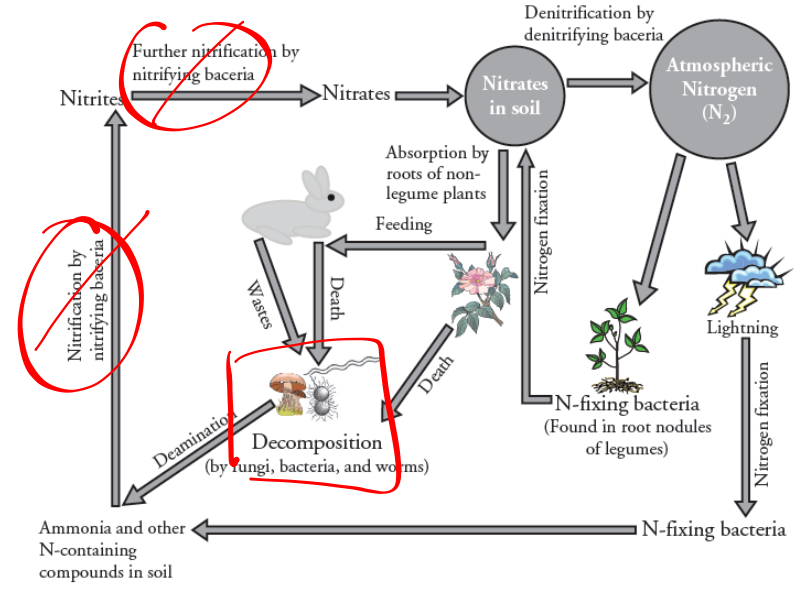
Model 3 – The Nitrogen Cycle



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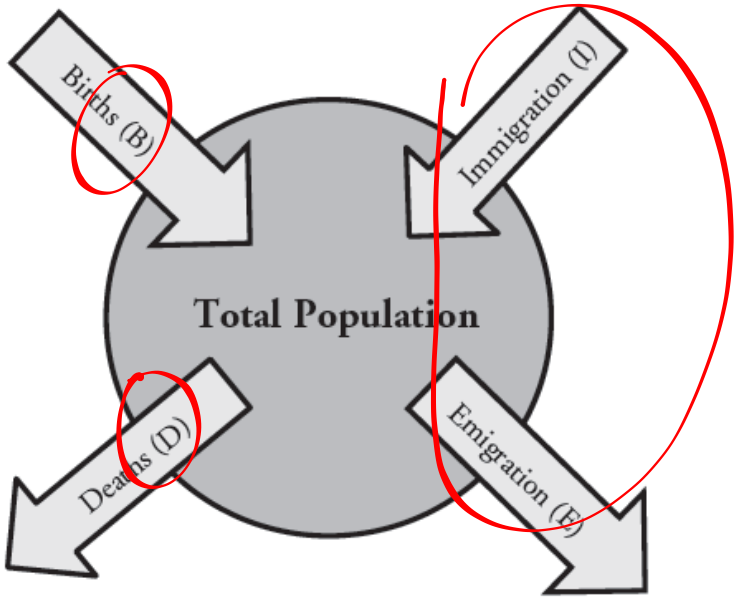
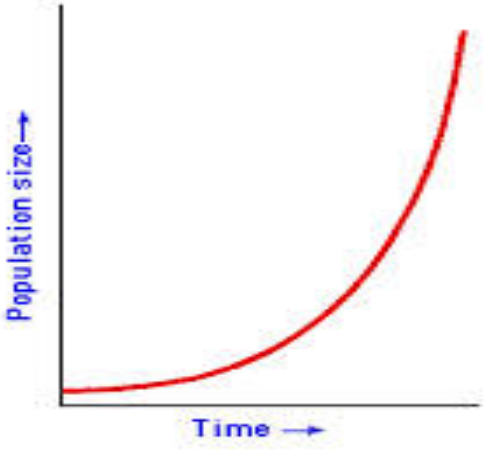
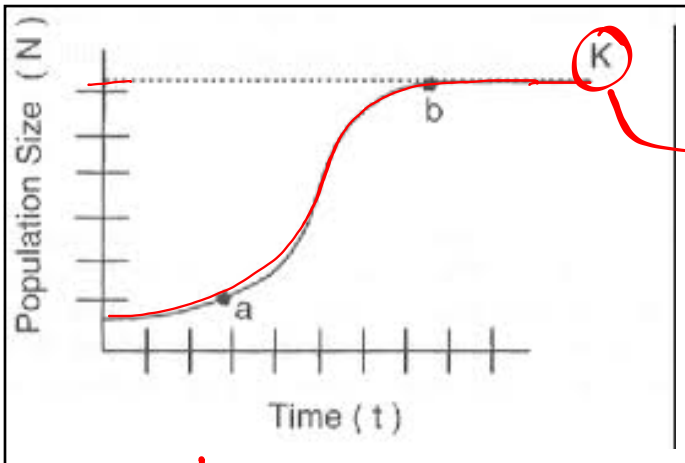
Model 1 – Population Growth





Exponential



carrying capacity

Logistic

Model 3 – Growth Curves

Diagram A—Exponential Growth Curve

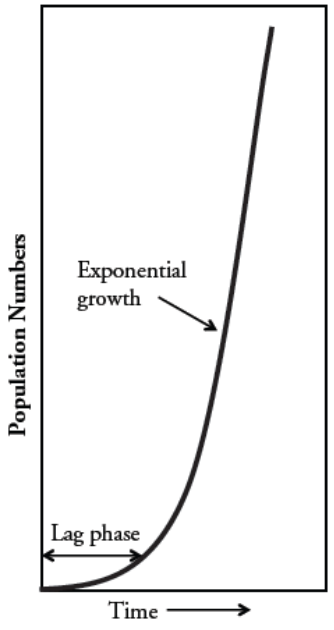
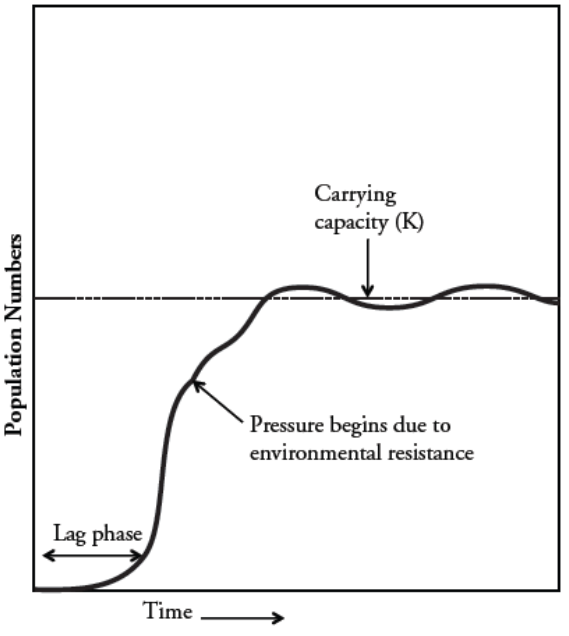
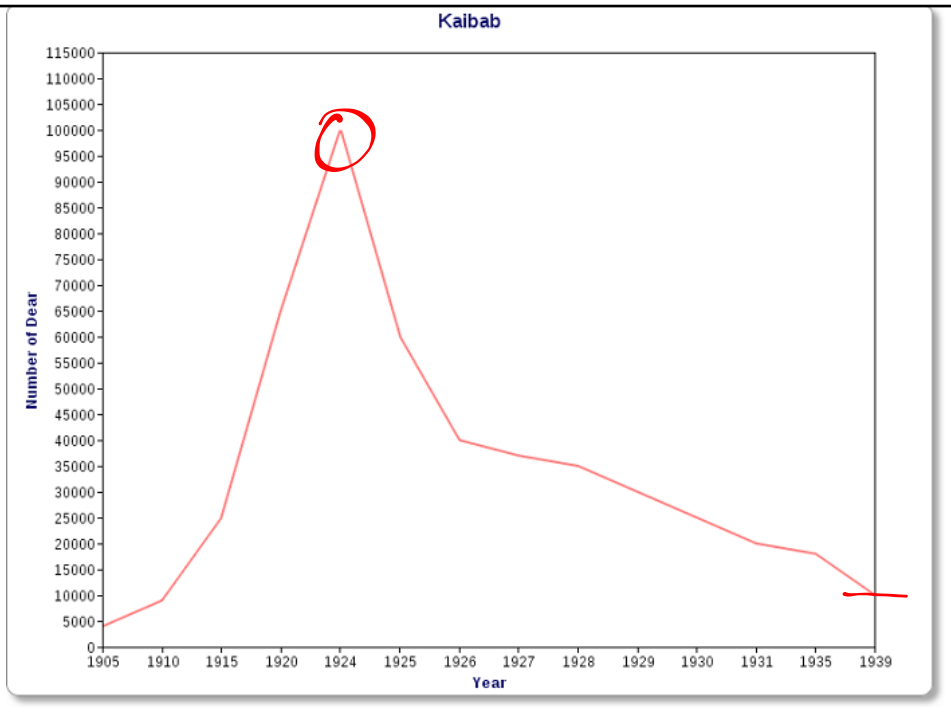


Diagram B—Logistic Growth Curve




Kaibab
Number of Deer
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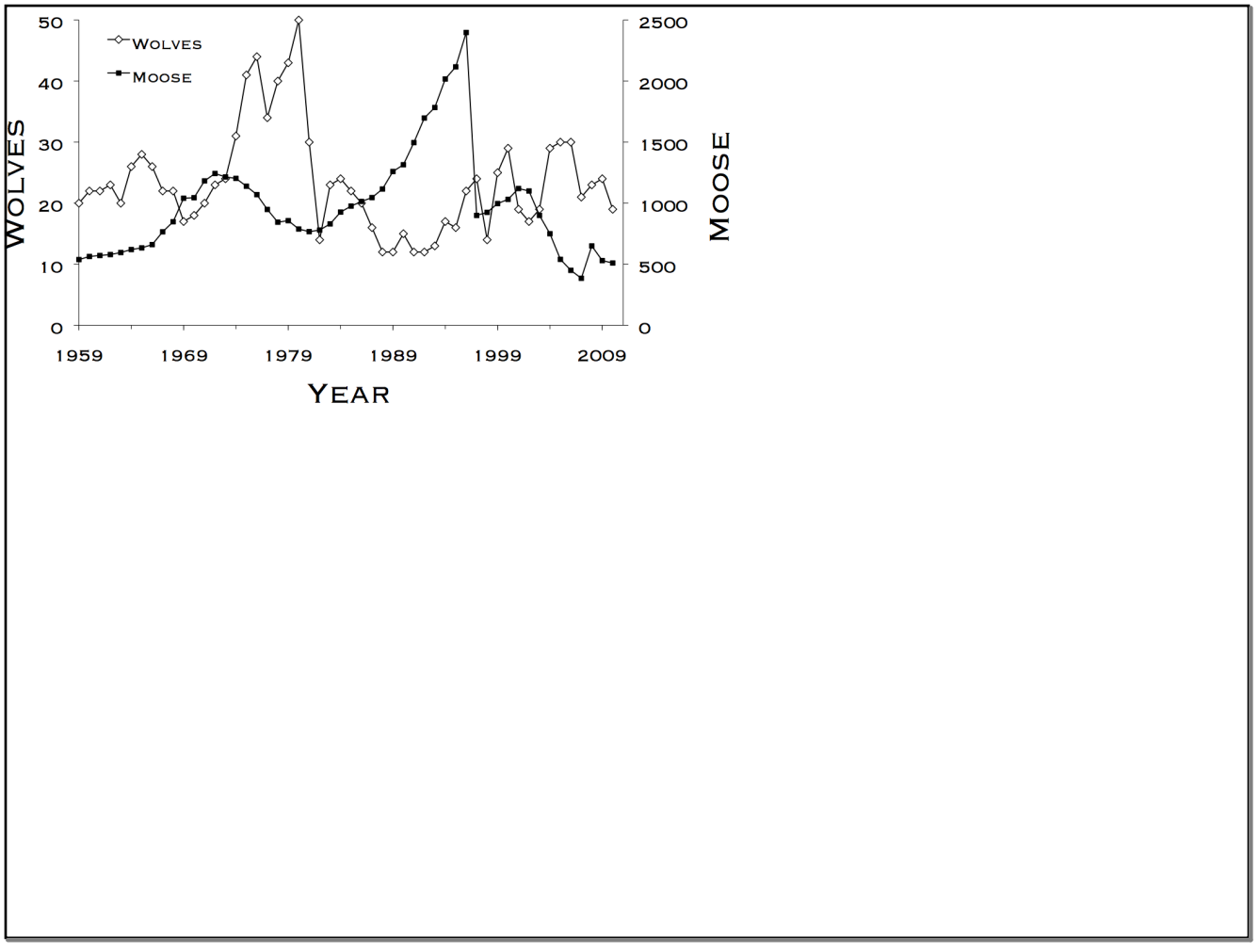
110000
105000
100000
95000
90000
85000
80000
75000
70000
65000
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
1905
1910
1915
1920
1924
1925
1926
1927
1928
1929
1930
1931
1935
1939
Year

March 09, 2017



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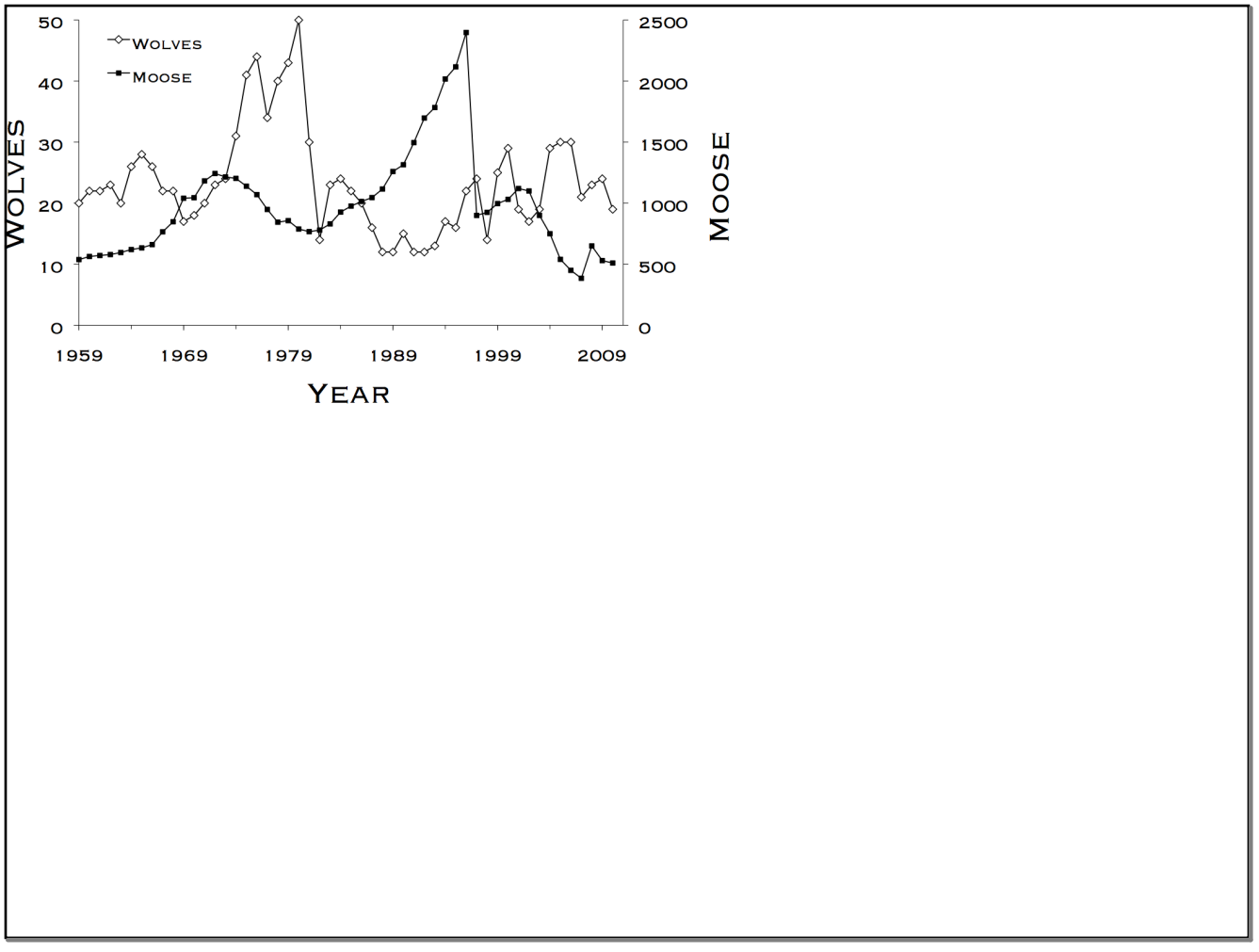

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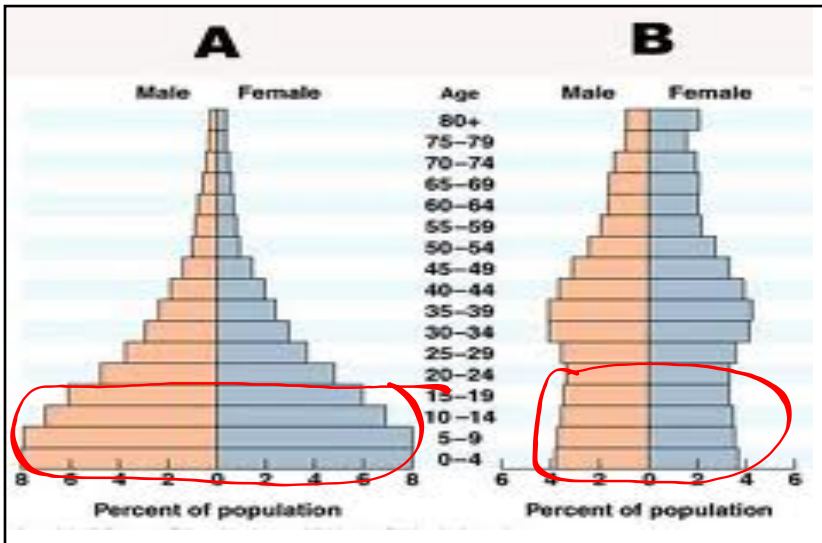
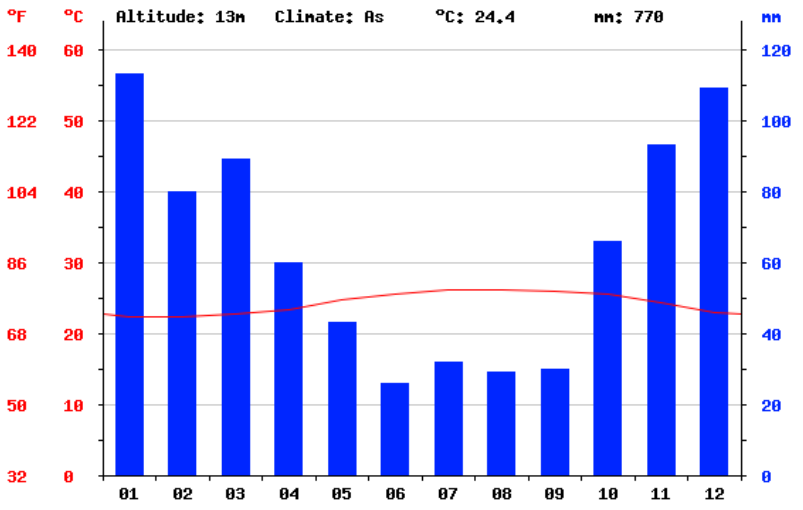
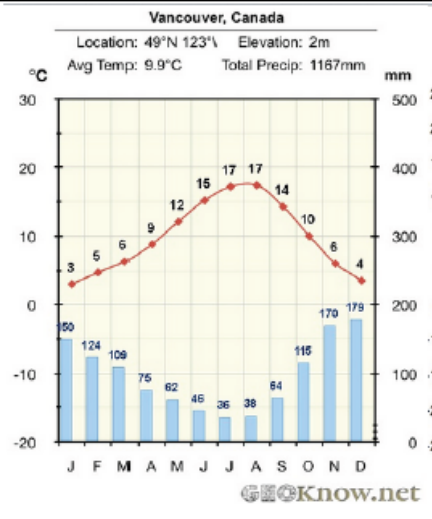
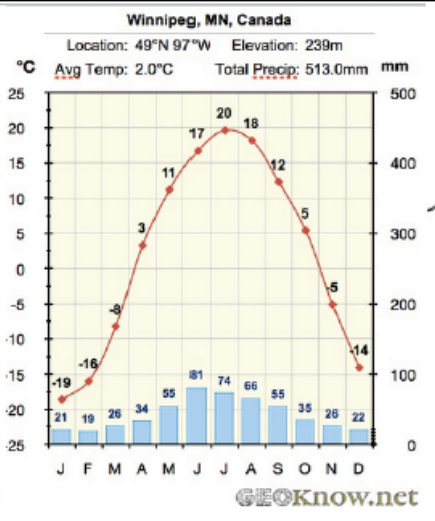


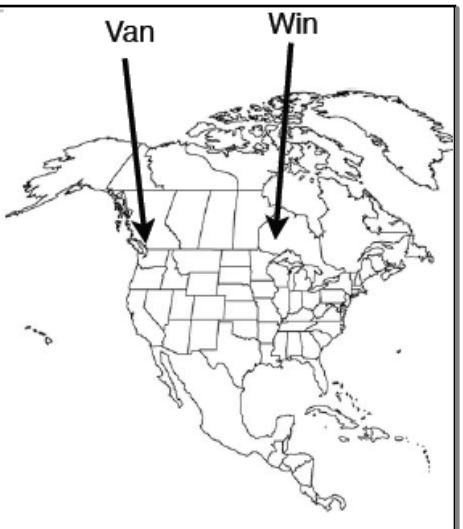
March 09, 2017



March 09, 2017







$$D = \frac{N(N-1)}{\sum n(n-1)}$$