Name: _____   **Date:** _____
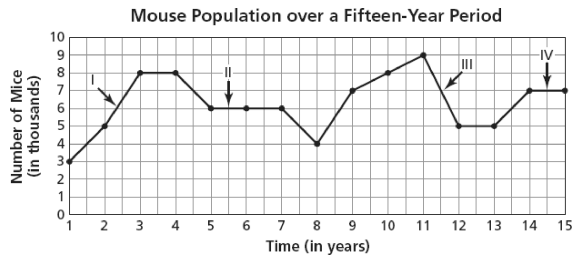
1. The graph below shows the population of mice living in a certain area over a fifteen-year period.

Mouse Population over a Fifteen-Year Period

Which numeral on the graph points to a time when the birth rate exceeded the death rate of the mice?

A. I   B. II   C. III   D. IV

2. Liverworts are plants that live in moist conditions and reproduce asexually. An individual liverwort is introduced to an environment where there were no liverworts before. After several generations, the area contains a small population of liverworts that are genetically identical.

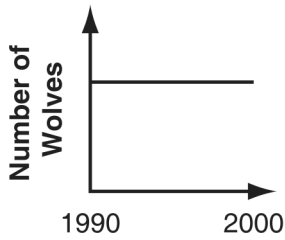What is *most likely* to happen to this population over time?

A. The population will evolve rapidly by increasing its reproductive rate

B. The population will become extinct because it cannot reproduce sexually.

C. The population will thrive as long as environmental conditions remain similar.

D. The population will slowly decline and disappear because it lacks genetic diversity.

3.

White-Tailed Deer Population

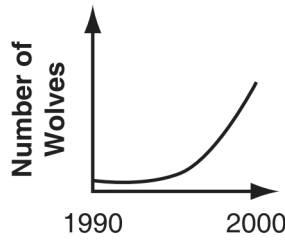Number of White-Tailed Deer (thousands)
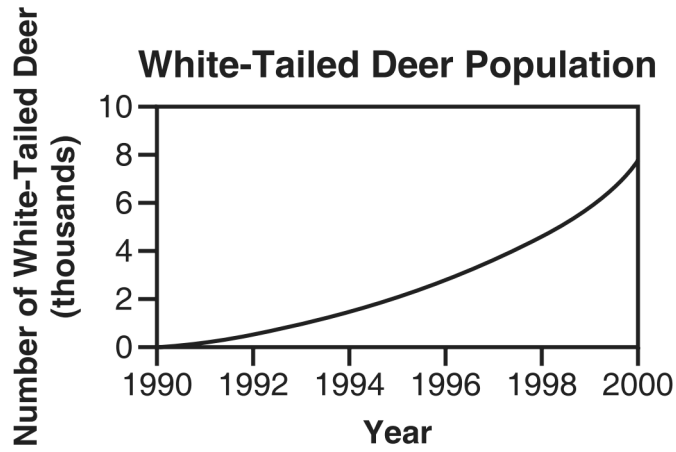
Year

The graph above shows how a white-tailed deer population recovered over a ten-year period after a population crash. Wolves in the same area feed primarily on deer. Which graph shows the *most likely* change in wolf population for the same ten-year period?

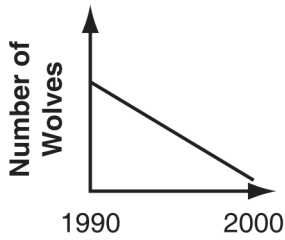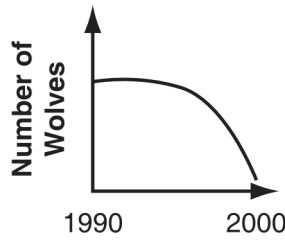A. **Wolf Population**

Number of Wolves

1990   2000

B. **Wolf Population**

Number of Wolves

1990   2000

C. **Wolf Population**

Number of Wolves

1990   2000

D. **Wolf Population**

Number of Wolves

1990   2000

Teaching about ecosystem

4. Two geese mate and raise their goslings (baby geese) each year. The table below shows the number of goslings that survive each year over a five-year period.

Year	Number of Goslings That Survive
1	6
2	2
3	4
4	6
5	5

Which of the following statements *best* explains why a different number of goslings survives each year?

A. The goslings develop different adaptations each year.

B. Different environmental conditions affect the goslings each year.

C. Some goslings inherit more traits from one parent than from the other.

D. The environmental conditions affect the parent geese more than the goslings.

5. The pea weevil is a type of insect. The table below shows the average time it takes for pea weevil eggs to hatch at different temperatures.

Temperature (°C)	Average Hatching Time (days)
11	38
14	20
16	16
18	10
22	10
24	7
25	5
27	5
28	7

Based on the data, which of the following conditions would promote the highest population growth rate in pea weevils?

A. cold springs with temperatures from 11°C to 16°C

B. moderate summers with temperatures from 25°C to 27°C

C. heat waves in which the temperature is sustained well above 28°C

D. overnight frosts after which the temperature warms from 0°C to 11°C

Teaching about ecosystem

6. The number of organisms an environment can support depends on the availability of environmental resources. Changes in the mule deer population in Nevada from 1900–2000 are shown in the graph below.

MULE DEER POPULATION, 1900–2000
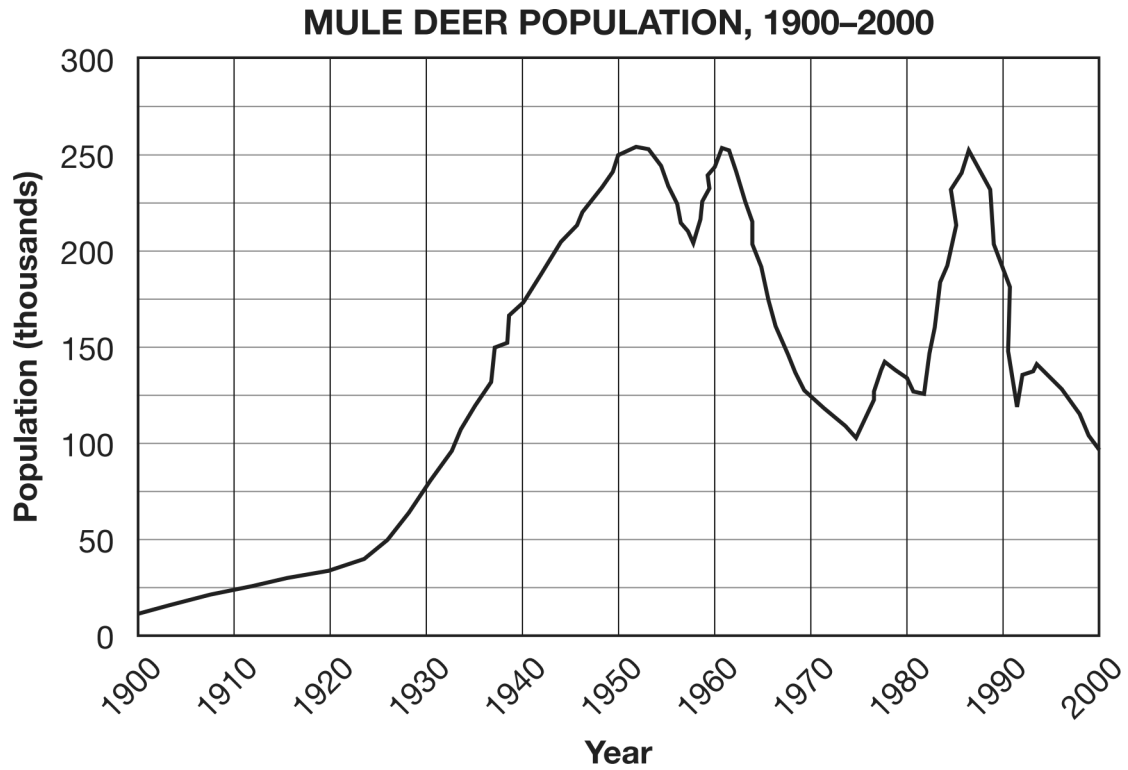
During which years did the mule deer population *most likely* experience the greatest decrease of environmental resources?

A. 1930–1950   B. 1956–1960   C. 1960–1970   D. 1976–1980

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1.
Answer: A

2.
Answer: C

3.
Answer: B

4.
Answer: B

5.
Answer: B

6.
Answer: C