

Which of the following might be an example of evolution?

- A. I've lived in the south for the last 6 years, so I can't tolerate cold anymore
- B. A population of wildflowers is now shorter than they were 50 years ago.
- C. A tadpole turned into a frog.
- D. I started fertilizing my garden two weeks ago and my plants are bigger now.

$$\text{Frequency(A)} = \frac{(\# \text{ heterozygoes} + 2 * \# \text{ AA homozygotes})}{2 * \text{total population size}}$$

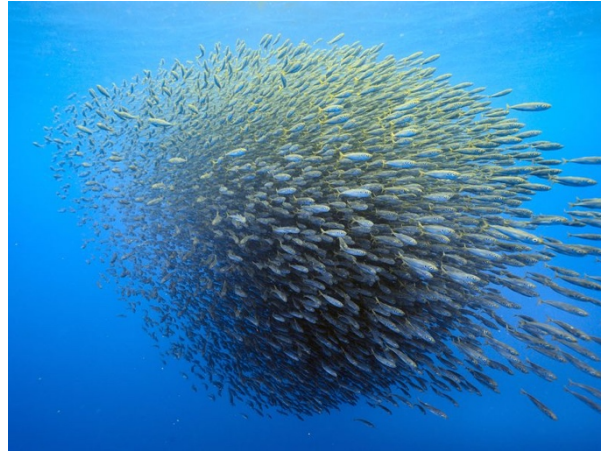
In a population of flowers, color shows incomplete dominance; AA individuals are red, aa individuals are white, and Aa individuals are pink. Of the 50 individuals, 12 are red, 16 are white, and 22 are pink. What is the allele frequency of A?

- A. 0.34
- B. 0.46
- C. 0.54
- D. 0.56
- E. 0.75

In which population will drift have the strongest effect?



A. Flock of birds



C. School of fish



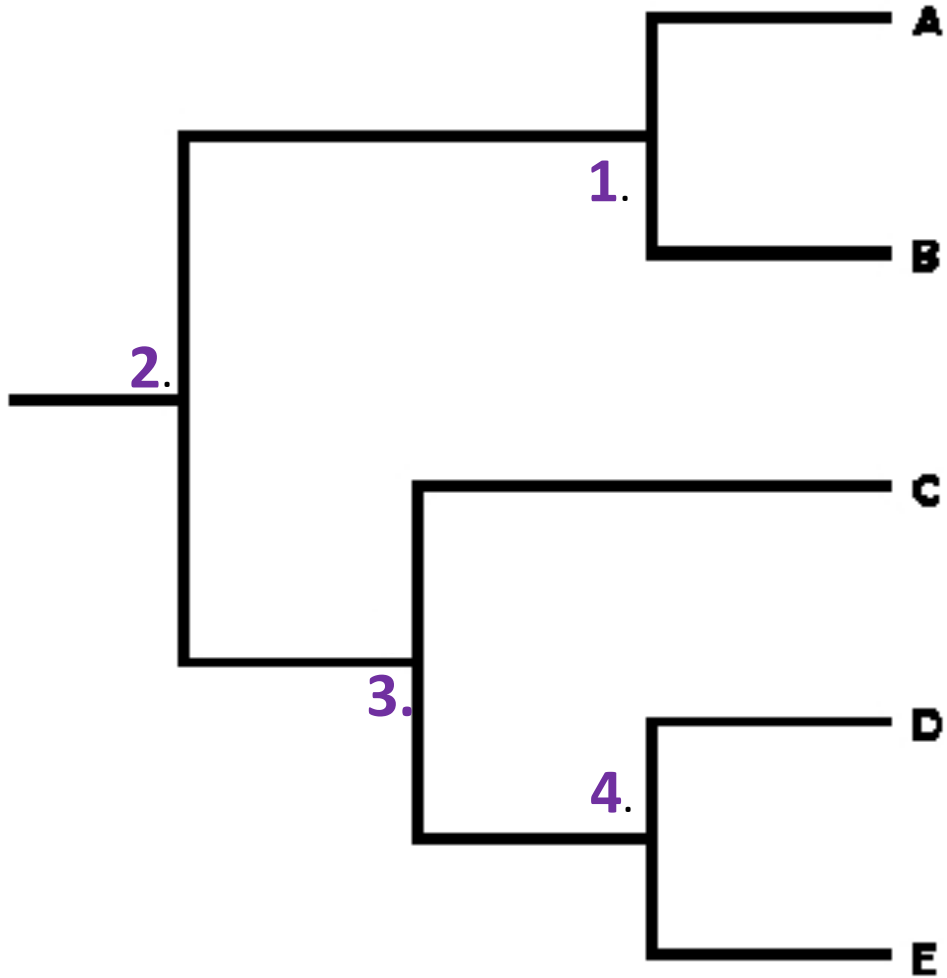
B. Forest of pine trees



D. Herd of elephants

If $p = 0.3$ and $q = 0.7$ (and those are the frequencies for alleles A and a, respectively) in the adults of a population, then the proportion of gametes carrying the A allele will be:

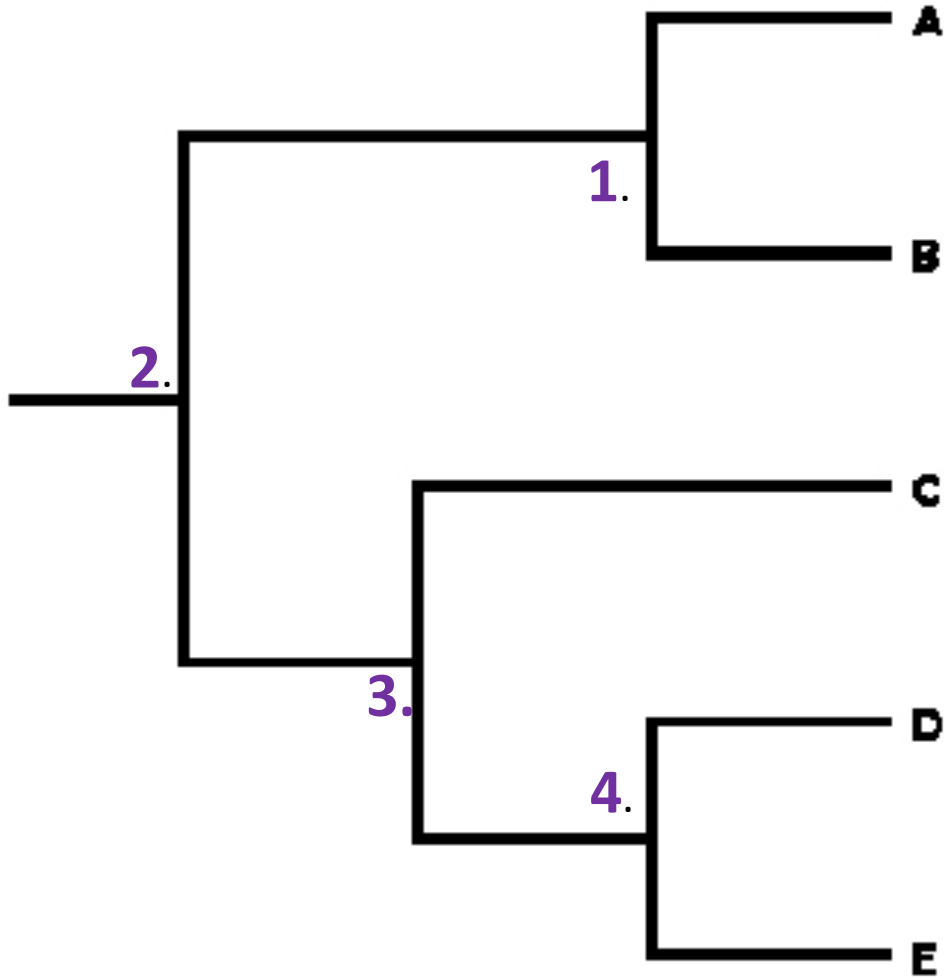
- A. 0.15
- B. 0.3
- C. 0.7
- D. 0.075



Which of these pairs are most closely related?

- A. A and C
- B. C and D
- C. B and C
- D. D and E

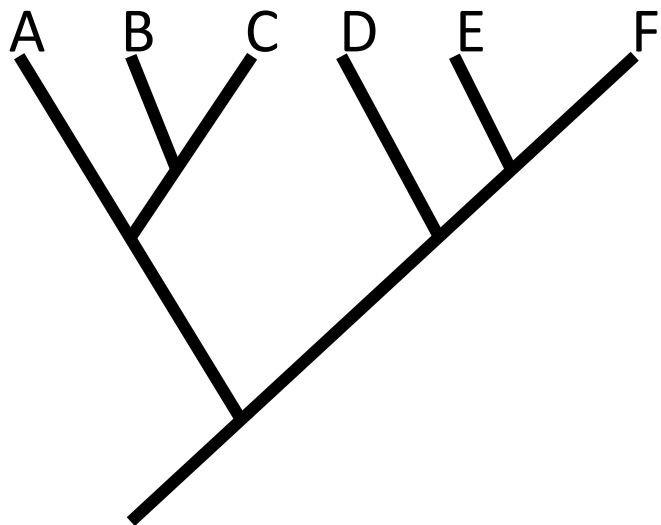
A pair of closely-related groups are sometimes called “sister taxa”



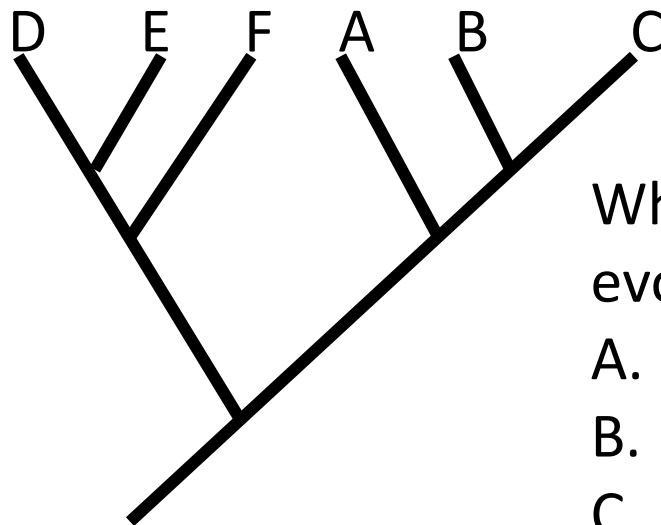
Which node is the most recent common ancestor of C and D?

- A. 1
- B. 2
- C. 3
- D. 4

1.



2.



Which of these trees shows a different evolutionary history than the others?

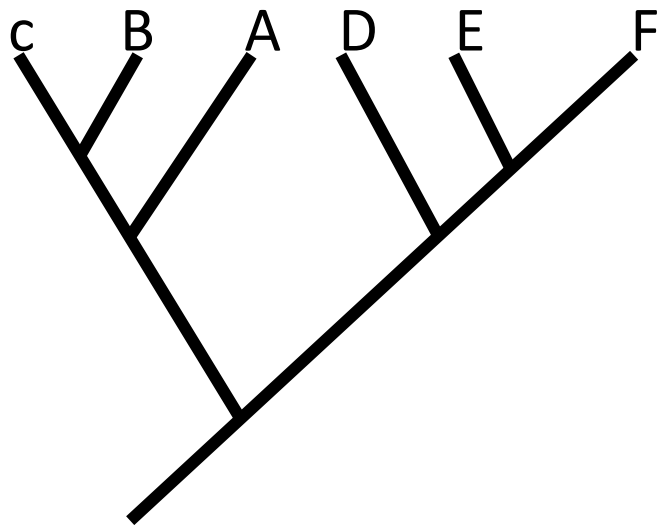
A. 1

B. 2

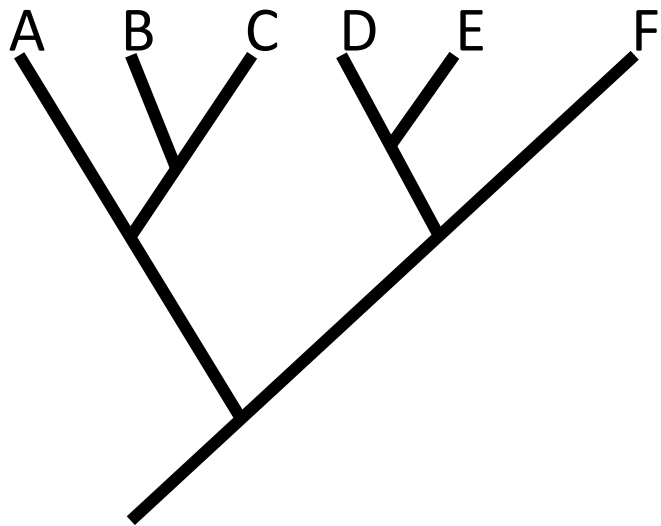
C. 3

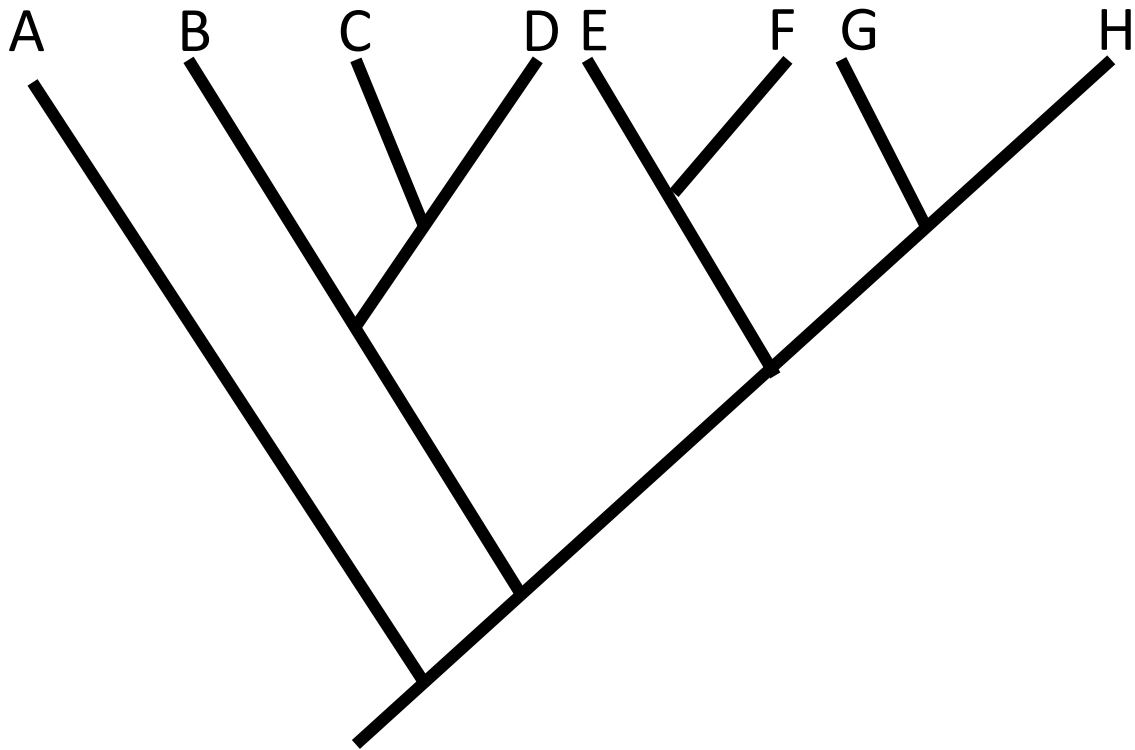
D. 4

3.



4.





Which group is monophyletic, according to this tree?

- A. A, B, C, D
- B. B, D
- C. E, F, G
- D. E, F, G, H
- E. A, G, H