Topic: Frequency histograms and polygons, and density curves

Question: Which interval would you use on the horizontal axis to create a frequency polygon for the data?

8, 8, 9, 10, 11, 12, 20, 25, 28, 29, 30, 31, 45

51, 55, 65, 67, 68, 68, 70, 72, 78, 86, 90, 91, 100

Answer choices:

A 2

B 5

C 10

D 20

Solution: C

Using tens as the interval for the horizontal axis would give you a good idea for the shape of the data. This set of data has numbers in each of those intervals. Choosing a smaller interval could result in data that was harder to read. Choosing a larger interval could result in a graph that didn't have enough information.

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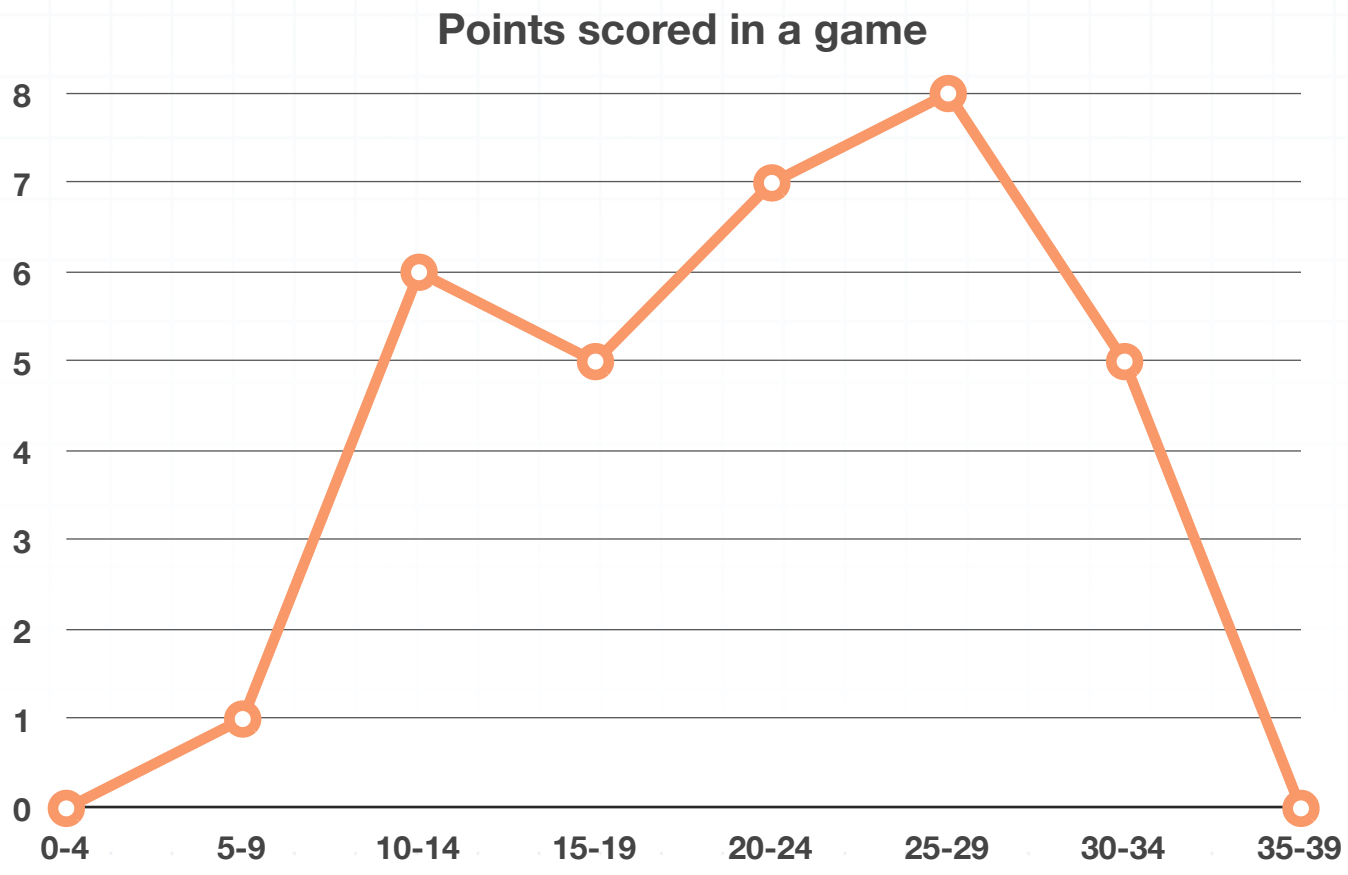
Question: Keith is in charge of a game at the school fair. He keeps track of the points scored by each individual player and creates a frequency polygon. How many times did someone score between $0 - 9$ points?



Answer choices:

A 1 time

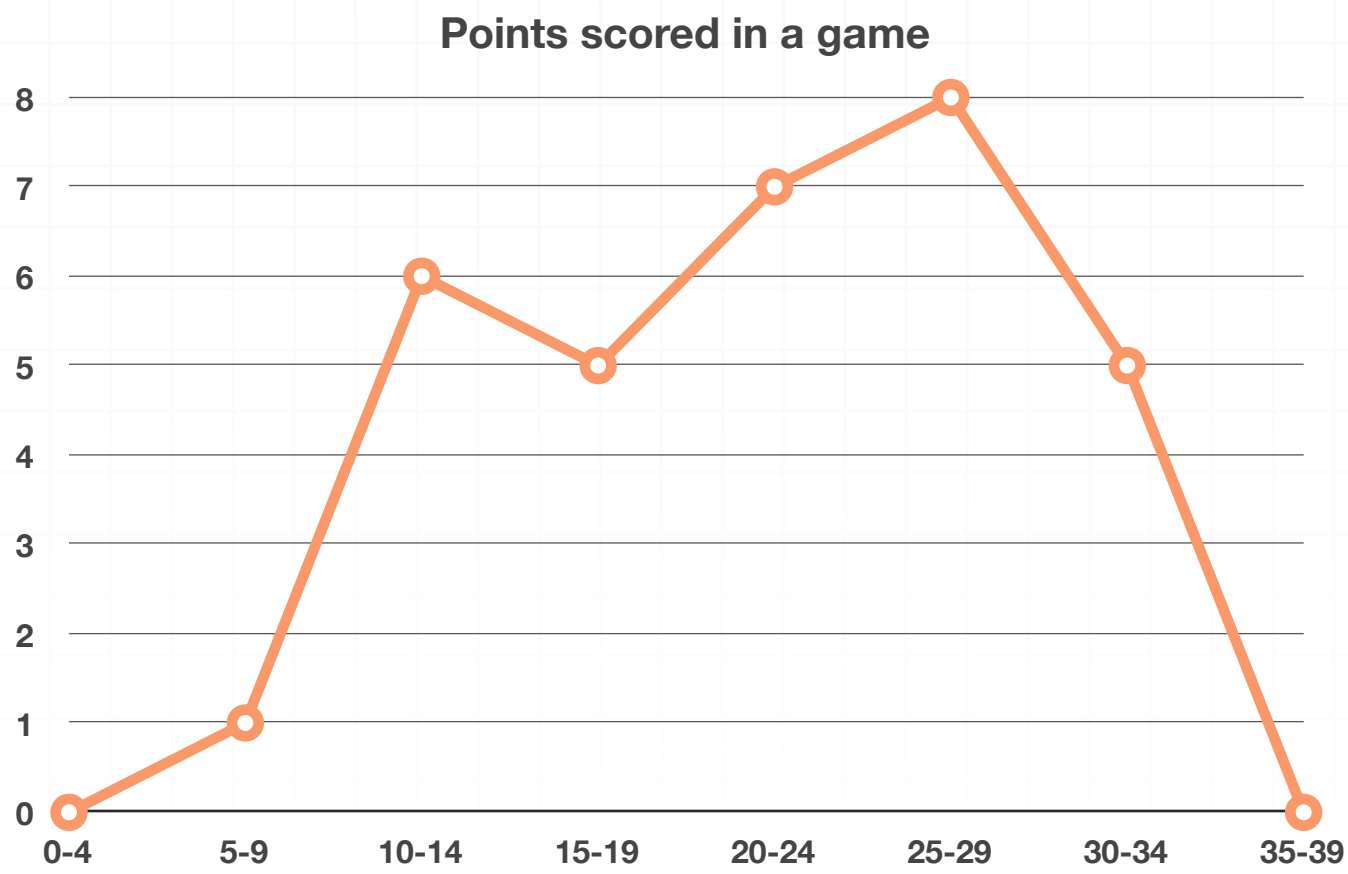
B 5 times

C 7 times

D 32 times

Solution: A

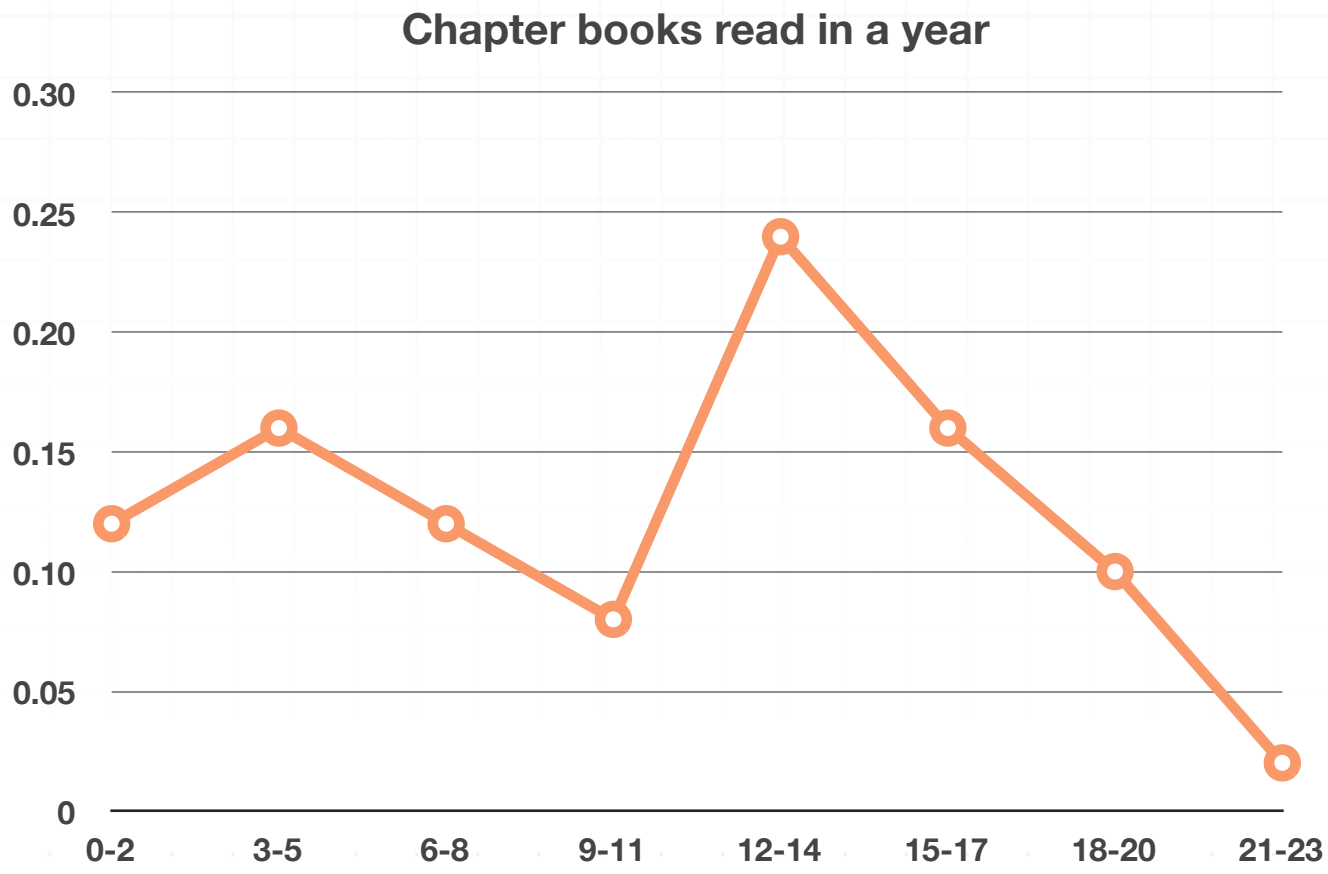
To look at how many times someone scored $0 - 9$ points, look at the intervals for $0 - 4$ and $5 - 9$.



No players scored $0 - 4$ points, and one player scored $5 - 9$ points.

Topic: Frequency histograms and polygons, and density curves

Question: Mr. Moore created a relative frequency polygon for the number of chapter books read in a year by 50 third graders at his school. How many students read $18 - 20$ books during the year?



Answer choices:

A 0.10

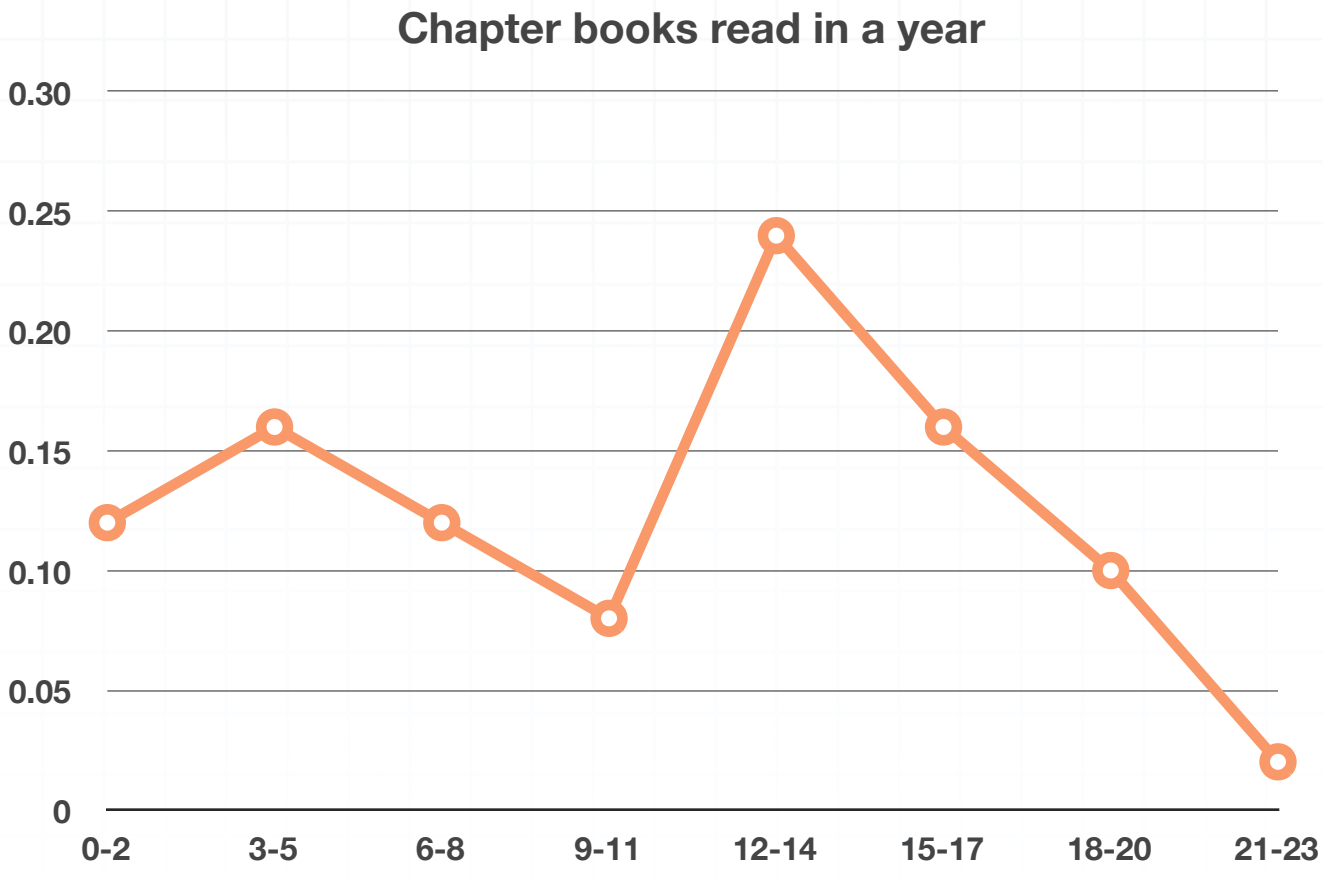
B 5

C 10

D There is not enough information to answer the question.

Solution: B

We are told the relative frequency polygon contains information on the class of 50 third grade students.



If we look at the $18-20$ interval, 0.10 or $10\,\%$ of the 50 third grade students read $18-20$ books during the year. We can calculate the number of students by multiplying.

$$0.10(50) = 5$$

This means 5 students read $18-20$ books during the year.