

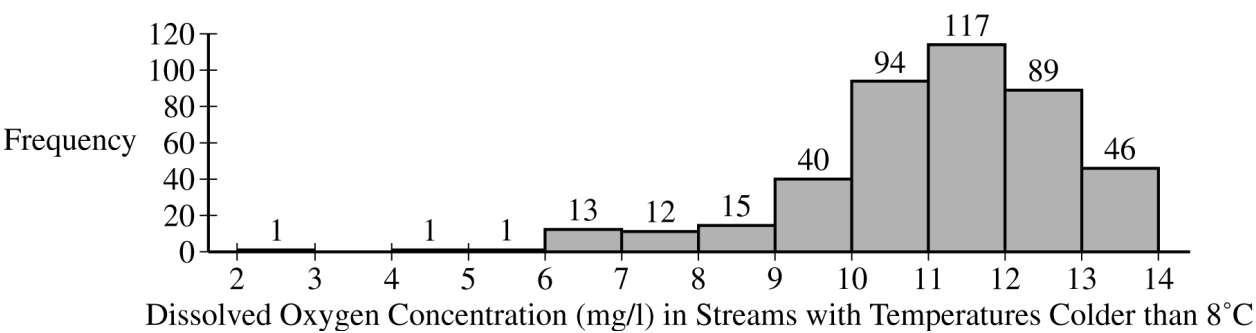
STATISTICS
SECTION II

Total Time—1 hour and 30 minutes
6 Questions

Part A
Suggested Time—1 hour and 5 minutes
5 Questions

Directions: Show all your work. Indicate clearly the methods you use, because you will be scored on the correctness of your methods as well as on the accuracy and completeness of your results and explanations.

As part of a study on the chemistry of Alaskan streams, researchers took water samples from many streams with temperatures colder than 8°C and from many streams with temperatures warmer than 8°C. For each sample, the researchers measured the dissolved oxygen concentration, in milligrams per liter (mg/l).



(a) The researchers constructed the histogram shown for the dissolved oxygen concentration in streams from the sample with water temperatures colder than 8°C. Based on the histogram, describe the distribution of dissolved oxygen concentration in streams with water temperatures colder than 8°C.

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Continue your response to **QUESTION 1** on this page.

Min	Q1	Median	Q3	Max	Mean	Std. Dev.
2.10	4.39	5.43	6.12	13.45	5.54	1.64

(c) The researchers believe that streams with higher dissolved oxygen concentration are generally healthier for wildlife. Which streams are generally healthier for wildlife, those with water temperature colder than 8°C or those with water temperature warmer than 8°C? Using characteristics of the distribution of dissolved oxygen concentration for temperatures colder than 8°C and characteristics of the distribution of dissolved oxygen concentration for temperatures warmer than 8°C, justify your answer.

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