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Resource ID#: 42829

Primary Type: Problem-Solving Task

The Canoe Trip, Variation 1

The purpose of this task is to give students practice constructing functions that represent a quantity of interest in a context, and then interpreting features of the function in the light of the context. It can be used as either an assessment or a teaching task.

The Canoe Trip, Variation 1 (Microsoft Word): This file includes the task and related information in Microsoft Word format.
The Canoe Trip, Variation 1 (PDF): This file includes the task and related information in PDF format.

General Information

Subject(s): Mathematics
Grade Level(s): 9, 10, 11, 12
Intended Audience: Educators , Students , Parents

Suggested Technology: Adobe Acrobat Reader, Microsoft Office

Freely Available: Yes

Keywords: The Canoe Trip Variation 1, rates, graphs, vertical asymptote, cpalms, icpalms, illustrativemathematics.org, illustrative mathematics, tasks, mathematics, math, Florida standards, resource, free, freely available, problems-based learning, student activities
Instructional Component Type(s): Problem-Solving Task

Resource Collection: Illustrative Mathematics

Source and Access Information

Contributed by: Hannah Davis
Name of Author/Source: Hannah Davis
District/Organization of Contributor(s): Leon
Is this Resource freely Available? Yes
Access Privileges: Public
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Aligned Standards

Name	Description
MAFS.912.F-BF.1.1:	Write a function that describes a relationship between two quantities. ★ a. Determine an explicit expression, a recursive process, or steps for calculation from a context. b. Combine standard function types using arithmetic operations. *For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.* c. Compose functions. *For example, if T(y) is the temperature in the atmosphere as a function of height, and h(t) is the height of a weather balloon as a function of time, then T(h(t)) is the temperature at the location of the weather balloon as a function of time.*

MAFS.912.F-IF.2.4:	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. *Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.* ★
MAFS.912.F-IF.2.5:	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. *For example, if the function h(n) gives the number of person-hours it takes to assemble engines in a factory, then the positive integers would be an appropriate domain for the function.* ★