Quiz Review
Nascar/Pay Plan
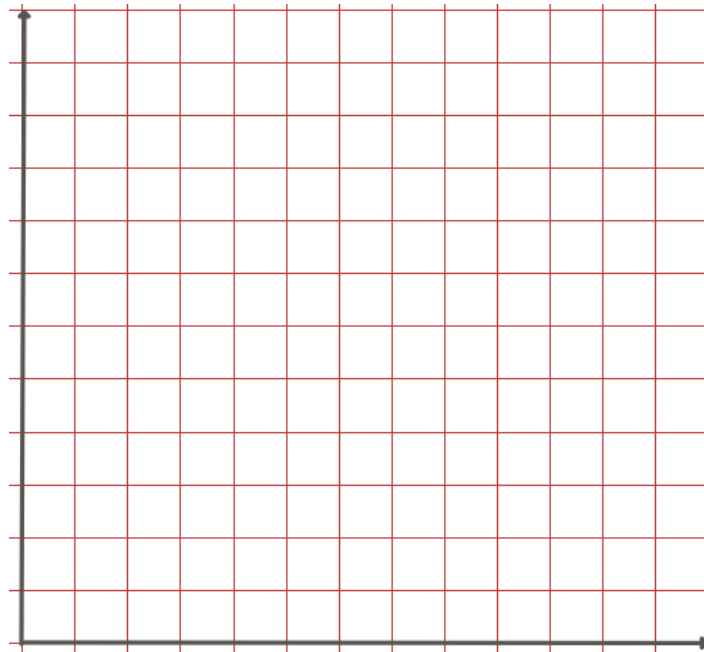
Use these problems to test your skill in analyzing nonlinear relationships like those in the NASCAR and Fresh Fare Market problems.

a. The Iditarod Trail Sled Dog Race goes 1,100 miles from Anchorage to Nome, Alaska, in March of each year. The winner usually takes about 10 days to complete the race.

   i. What is the typical average speed (in **miles** per **day**) for Iditarod winners?

   ii. Make a table and sketch a graph showing how average speed for the Iditarod race depends on race time.   Use the times ranging from 2 to 20 days in steps of 2 days.

Race time (days)										
Avg. speed (miles/day)										

   iii. What rule shows how to calculate average speed s for any Iditarod race time t?
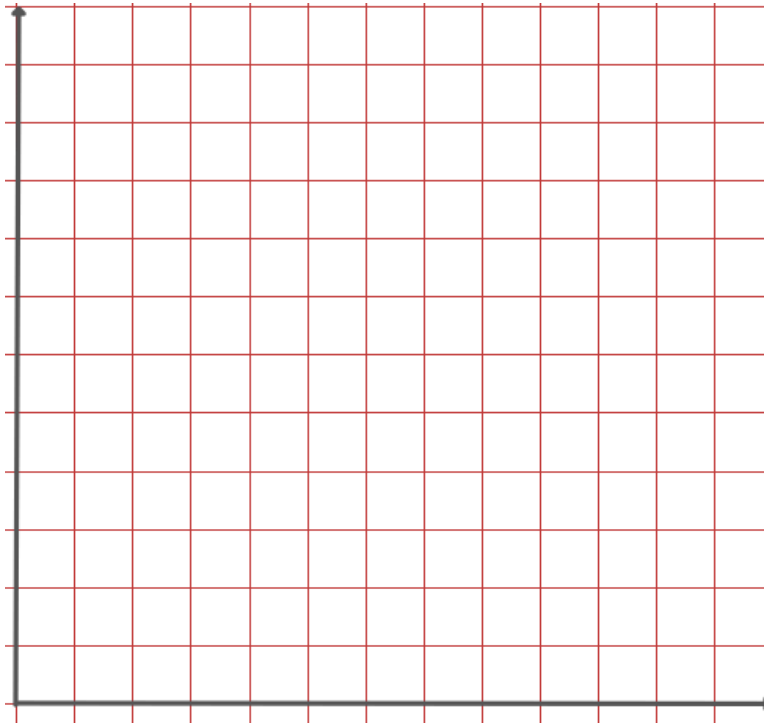
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   iv. Compare the table, graph, and rule showing Iditarod average speed as a function of race time to that showing Daytona 500 race tie as a function of average speed in Problem 2 of this investigation. Explain how relationships in the two situations are similar and how they are different.

b. Ethan and Anna tried to get a monthly allowance of spending money from their parents. They said, "You only have to pay us 1 penny for the first day of the month, 2 pennies for the second day of the month, 4 pennies for the third day, and so on."

i. Make a chart and graph the data for the first 10 days of the month. Only find the amount paid on the given day, not the total amount paid.

Day										
$ paid										

ii. What would Ethan's and Anna's parents have to pay on day 20 30 of each month?