Problem of the Week

Problem B

Yukon Do It!

The Yukon Quest is one of the most famous endurance sled dog races in the world. The total distance the race covers is 1635 km.

(a) If the average distance travelled per day for each team is 145 km, how many days will it take, on average, for a team to complete the Yukon Quest?

(b) A team of Alaskan huskies travels at 15 km per hour, with an 18 minute rest after every three hours. A team of Siberian huskies runs more quickly at 20 km per hour, but requires a 30 minute rest after every two hours.

On a certain day both teams travel 145 km. Create a broken-line graph of distance versus time for each team for that day.

SUGGESTION: You may find it helpful to first construct a table for each team, matching the total distance travelled with the elapsed time for each interval of travel and rest.

(c) Suppose that the weight of some additional equipment slows the average speed of the Siberian huskies by 5 km per hour. If the team still travels 145 km in a day, by how many minutes will this increase their travel time for the day?