Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_ Date: \_\_\_\_\_

**6.3B HOMEWORK: Comparing Linear Functions**

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| 1. **RACE** You and a friend race each other. You give your friend a 50-foot head start. The distance y (in feet) your friend runs after x seconds is represented by the linear function y= 14x + 50. The table shows the distances you run.      |  |  |  | | --- | --- | --- | | 1. Write a linear function that relates your distance to the number of seconds (write an equation for the table). | 1. Who runs at a fast rate? 2. What is the rate? | 1. For what distances will you win the race? Explain. *Hint: create a table for each person.* | |
| 1. **CALORIES** The number of Calories burned y after x minutes of kayaking is represented by the linear function y = 4.5x. The graph shows the calories burned by hiking.  |  |  |  | | --- | --- | --- | |  | 1. Which activity burns more calories per minute? *Hint: write an equation for hiking.* | 1. How many more calories are burned after doing the activity in part (a) than the other activity for 45 minutes? | |
| 1. **SAVINGS** You and your friend are saving money to buy bicycles that cost $175 each. The amount y (in dollars) you save after x weeks is represented by the equation y = 5x +45. The graph shows your friend’s savings.  |  |  |  | | --- | --- | --- | |  | 1. Who has more money to start? 2. Who saves more per week? | 1. Who can buy a bicycle first? Explain. | |
| 1. The earnings y (in dollars) of a nighttime employee working x hours are represented by the linear function   y = 7.5x + 30. The table shows the earnings of a daytime employee.       1. Which employee has a higher hourly wage? 2. Write a linear function that relates the daytime employee’s earnings to the number of hours worked. 3. In the same coordinate plane, graph the linear functions that represent the earnings of the two employees. |

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