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

**6.3B HOMEWORK: Comparing Linear Functions**

Be sure to show how you got your answer and label with units where appropriate.

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| 1. Manager A earns $15 per hour and receives a $50 bonus. The graph shows the earnings of Manager B.

(HINT: Make tables for both managers)

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| --- | --- |
|  | 1. Which manager has a higher hourly wage?
2. After how many hours does Manager B earn more money than Manager A?
3. When will Manager A have $650? (HINT: Use the equation)
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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.

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| --- | --- | --- |
| 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 faster rate? How do you know? In addition to showing your work, explain.
 | 1. How long does it take for you to reach 190 feet? How long does it take your friend?
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| 3. CALOIRES. 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.

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| --- | --- | --- |
|  | 1. Which activity burns more calories per minute? *Hint: write an equation for hiking.*
 | 1. Use the linear functions to determine the number of calories burned for 45 minutes of hiking and 45 minutes of kayaking?
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| **4. 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.

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| --- | --- | --- |
|  | 1. Who has more money to start?
2. Who saves more per week?
 | 1. Who can buy a bicycle first? Explain.
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