

Date: _____

Your Beating Heart

Introduction

Purpose: To determine how different activities affect your heart rate.

Materials: Stopwatch, wristwatch, or clock with a second hand

Procedure:

1. Decide on five physical activities (make sure they can be done in the classroom) and write them in the “Activity” column of your data table and your partner’s data table on page 28. Try to select a variety of activities such as sitting, walking, touching your toes, or running in place.
2. Decide as a pair how much you think each activity will affect your heart rates and record it in the “Ranking” column of each data table. Write “1” if you think the activity will affect your heart rates the least. Write “5” if you think the activity will affect your heart rates the most. Rank the remaining activities as “2,” “3,” or “4.”
3. As your partner times you with a watch or clock, do the lowest ranked activity for one minute, then immediately count your pulse for 15 seconds. Write down your pulse in the “Number of Pulses in 15 Seconds” column on the “Your Data” table.
4. Repeat the experiment for the remaining activities in the order ranked so that the activity ranked “5” is performed last. Make sure to rest for one minute between each activity. Record the number of pulses in 15 seconds for each activity in the table as indicated.
5. Multiply each pulse number by 4. Write these numbers down in the “Heart Rate” column of the data table. This is your heart rate for each activity.
6. Switch roles with your partner and time them as they do the experiment. Write down your partner’s results in the “Partner’s Data” table below your own.
7. Make a bar graph of your data on pages 29–30.

Date: _____

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Recording Your Observations

Your Data:

Activity	Ranking	Number of Pulses in 15 Seconds		Heart Rate (number of beats in one minute)
			× 4	
			× 4	
			× 4	
			× 4	
			× 4	

Partner's Data:

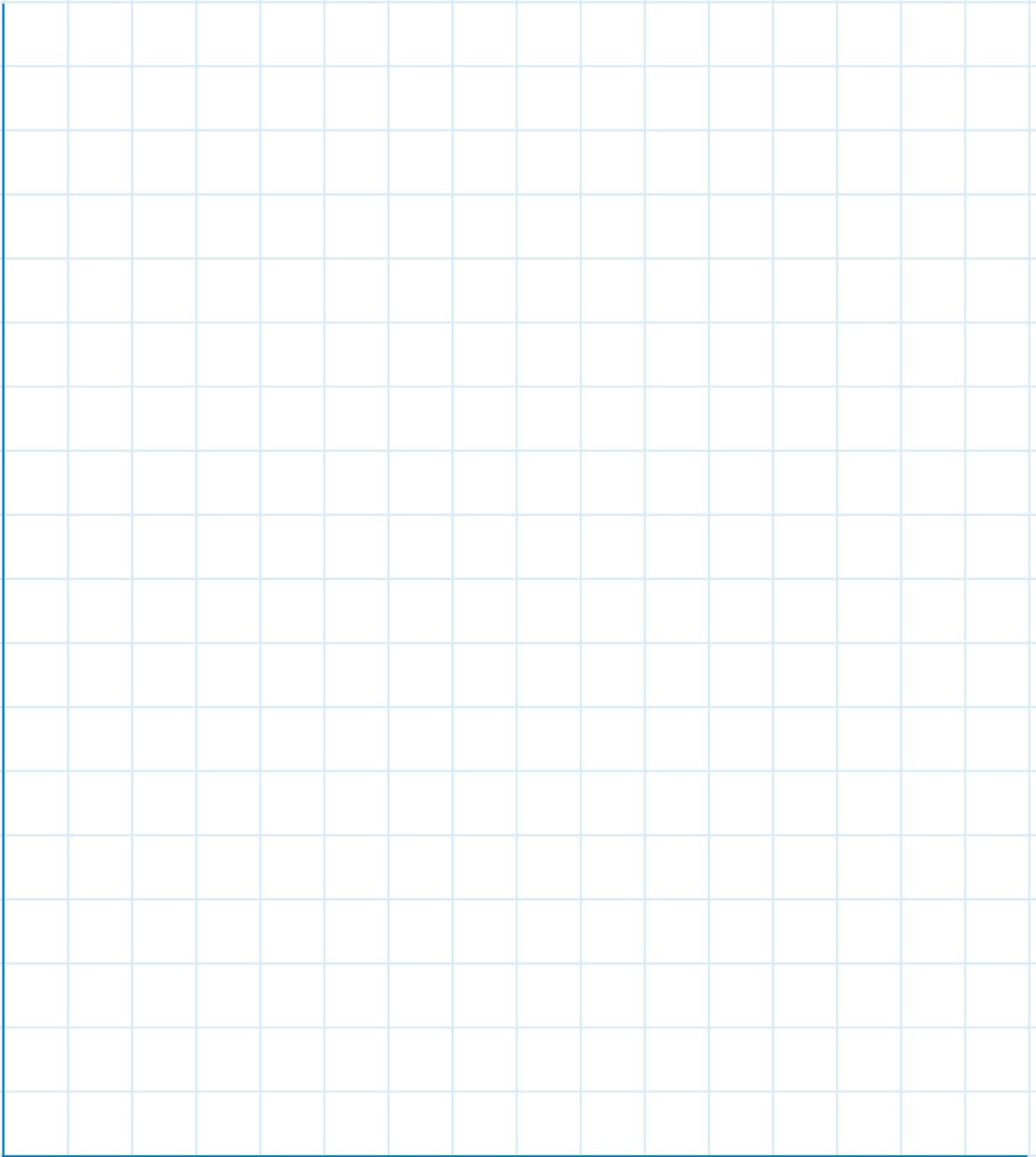
Activity	Ranking	Number of Pulses in 15 Seconds		Heart Rate (number of beats in one minute)
			× 4	
			× 4	
			× 4	
			× 4	
			× 4	

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Your Beating Heart

Graphing Your Data

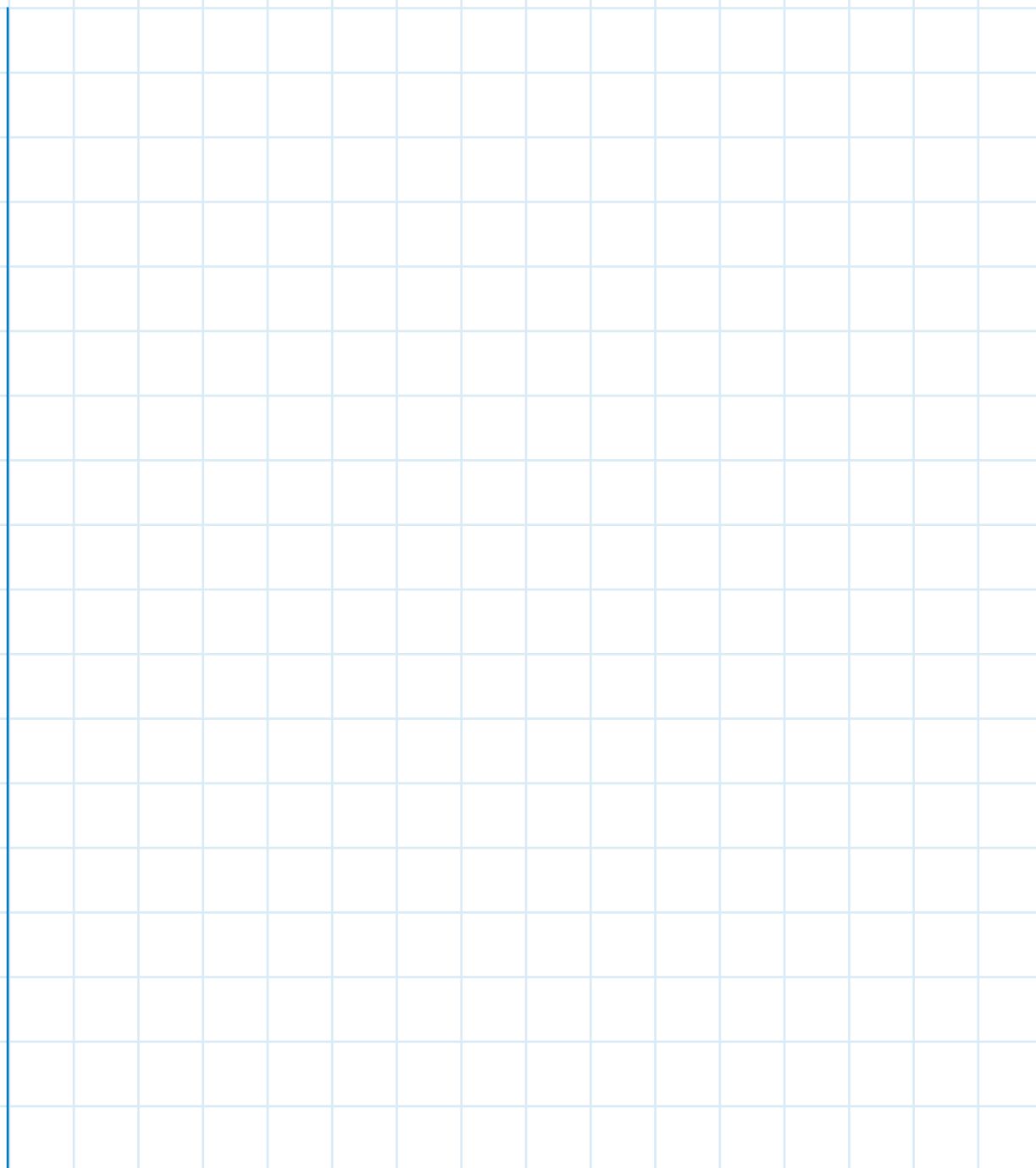
Use this page and the following page to make a bar graph of the data you collected on page 28.



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Graphing Your Data



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Analysis: Making Sense of the Data

1. Which activities increased your heart rate the most?
2. Which activities increased your heart rate the least?
3. Was the order in which you ranked the activities accurate? Explain.
4. What changes did you notice about your heart rate as you became more active?
5. Why did your heart rate change when you were more active? Use pages 65–66 of your reference book to help you answer this question.