

# Mind Stretch



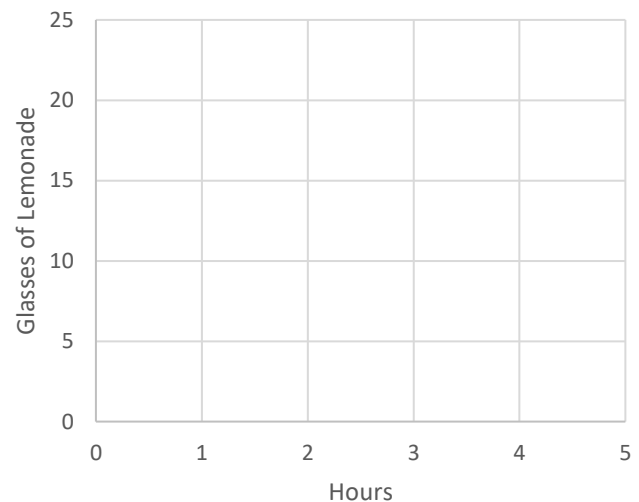
## Munching on Math

1. Fill in the following table, then graph, complete the tape diagram, and write the sentence.

a. Table:

Hours	Glasses of Lemonade
0	
1	5
2	
3	
4	
x	

b. Graph the data in your **completed** table



c. Tape Diagram **one line** of **your table**



= 1 glass of Lemonade

d. Describe **your tape diagram** by completing the following sentence:

If Cosmo's Café sells 5 lemonades per hour, then...

2. Complete the following sentences in your own words.

a. Unit rate means....

b. An example of this is....

<sup>1</sup>Inspiration for this task: Textbook introduction to EE5, particularly Ready for Proportional Relationships (p. 72) found in California Go Math! Middle School Grade 8 (Houghton Mifflin/Harcourt), Problem of the Month – Movin 'n Groovin, downloaded from Inside Mathematics, developed by Noyce Foundation. Munching Challenge adapted from Paying Attention to Proportional Reasoning: Support Document for Paying Attention to Mathematical Education. (2012). ServiceOntario, Ontario, Canada.

# Workout

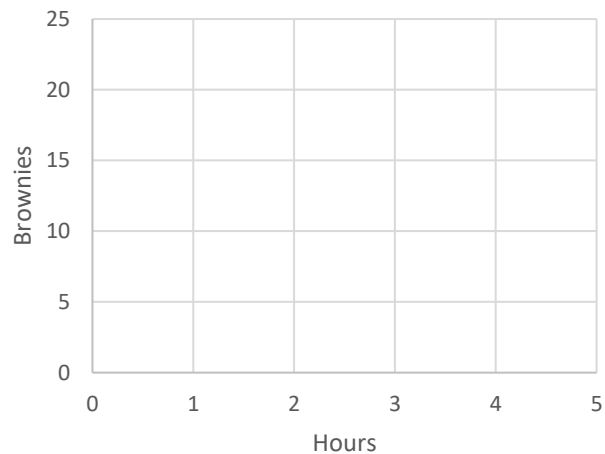


## Munching on Math

Cosmo's Cafe sold 9 brownies in 2 hours. Assume that Cosmo's Cafe sells brownies at the same rate each hour

1. Complete the table and the graph.

Hours	Brownies
0	
1	
2	
3	
4	
x	



2. How many brownies did Cosmo sell in 1 hour? (NOTE: This is the **unit rate** for the number of brownies sold by hour).
3. Where do you see the unit rate in the graph? Explain.




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## Check Your Pulse

Compare your answers with a partner. Discuss where you agree or disagree.

1. In a few words, explain what part(s) were difficult for you?

Circle the thumb that best describes how you are feeling:

	I have lots of questions, I need help. 	Almost got it, but need practice. 	Got it. I can explain this to a classmate. 
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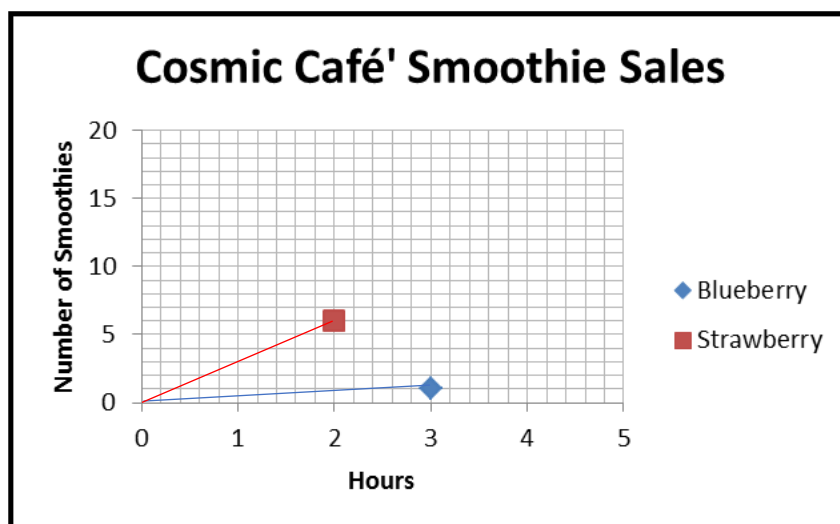
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# Final Lift



## Munching on Math

Cosmo's Café graphed their sales of fruit smoothies.



1. How many **blueberry** smoothies do you think Cosmo sold in **zero hours**? Why?
2. Based on your reasoning above, how many **strawberry** smoothies do you think Cosmo sold in **zero hours**?
3. According to the graph, how many **strawberry** smoothies did the cafe sell each hour? Assume that Cosmo's sells smoothies at the same rate each hour.

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4. Compare the rate of sales of strawberry smoothies to blueberry smoothies.
5. At these rates, will Cosmo's Café ever sell the same number of blueberry smoothies as strawberry smoothies in the same number of hours? Why or why not? Use tables, graphs, words, and/or equations to explain your thinking.
6. Cosmo's Café is growing their own fruit. Over one month:
- A lemon tree grew from 100 to 112 centimeters in height.
  - A strawberry plant grew from 10 to 20 centimeters in height.

Cosmo says that the lemon tree grew more than the strawberry plant, but his gardener disagreed.

To support his thinking Cosmo said the lemon tree grew 12 centimeters ( $112 - 100$ ) and the strawberry plant grew 10 centimeters ( $20 - 10$ )

The gardener observed that the lemon tree grew 12% ( $(112-100)/100$ ) but the strawberry plant grew 100% ( $(20-10)/10$ ).

Who do you think is right? Explain your thinking.

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