

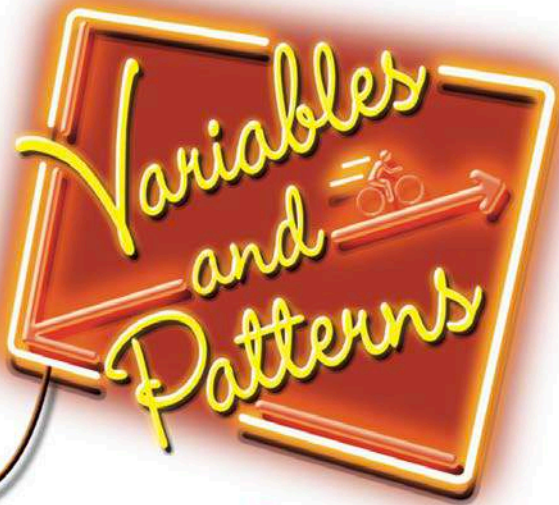


# Grade 6 Student Work

## *Variables and Patterns* Problem 1.3

From Lewes to Chincoteague Island: Stories, Tables, Graphs

CONNECTED  MATHEMATICS<sup>3</sup>



**Focus on  
Algebra**

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## Problem 1.3



Malcolm and Liz drove the tour van on the way from Lewes to Chincoteague. They forgot to record time and distance data. Fortunately, they wrote some notes about the trip.

TripJournal
All Entries
June 7

Entry 1: We started at 8:00 A.M. and rode against a strong wind until our midmorning break.

Entry 2: About midmorning, the wind shifted to our backs.

Entry 3: Around noon, we stopped for BBQ lunch and rested for about an hour. By this time we had traveled about halfway to Chincoteague.

Entry 4: Around 2:00 P.M., we stopped for a brief swim in the ocean.

Entry 5: At about 4:00 P.M., all of the riders were tired. There were no bike lanes. So we packed the bikes in the trailer and rode in the van to our campsite in Chincoteague. We took 9 hours to complete today's 80-mile trip.

Edit
✎
📷

- A** Make a table of (*time*, *distance*) values to match the story told in Malcolm and Liz's notes.
- B** Sketch a coordinate graph that shows the information in the table. Does it make sense to connect the points on the graph? Explain your reasoning.
- C** Explain how the entries in your table and graph illustrate the trip notes.
- D** Which representation of the data (*table*, *graph*, or *written notes*) best shows the pattern of change in distance over time? Explain.





# The Lesson That Produced This Student Work

## Explore Part 1

Small groups created posters showing their work for Problem 1.3.

## Explore Part 2

During a gallery walk, groups used sticky notes to give feedback to others.

## Summarize

Students used the feedback from peers to change their work, discuss changes that could be made to their work, or to disagree with the feedback and justify a decision made when creating their poster.

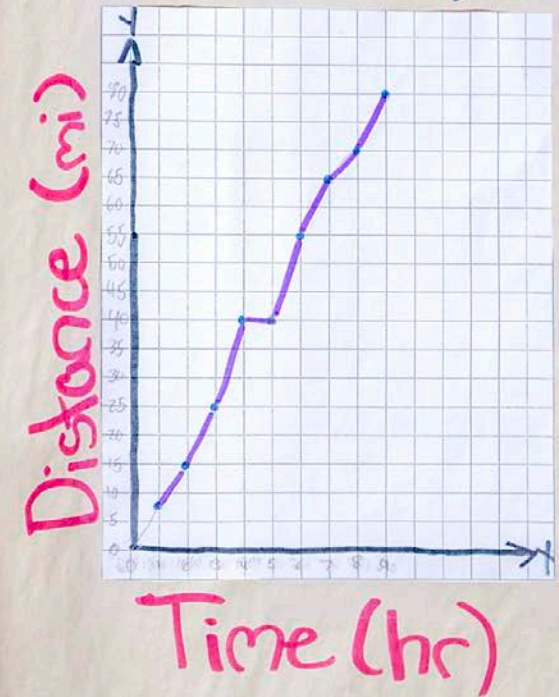




# Table Bike Trip

Hours	1 <sup>st</sup> hour	2 <sup>nd</sup> hour	3 <sup>rd</sup> hour	4 <sup>th</sup> hour	5 <sup>th</sup> hour	6 <sup>th</sup> hour	7 <sup>th</sup> hour	8 <sup>th</sup> hour	9 <sup>th</sup> hour
Distance	8 mi	15 mi	25 mi	40 mi	40 mi	55 mi	65 mi	70 mi	80 mi

# Graph Bike Trip



CONNECTED MATHEMATICS 3



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# Peer Feedback for Group A

- Missing 5:00 pm  
! not

+ Good time  
increments

+ proportioned  
good

- Put actual hour  
instead of just  
like 1<sup>st</sup> and 2<sup>nd</sup> hour  
etc

~~#3~~  
~~The graph looks much~~  
~~different from ours!~~  
~~#4~~

#2 looks neat and  
also looks the same  
to other groups

~~I don't like this~~  
~~they look so~~  
~~break it up~~

It is very neat and  
readable  
but very close to each  
other and it goes up  
all different times  
OK

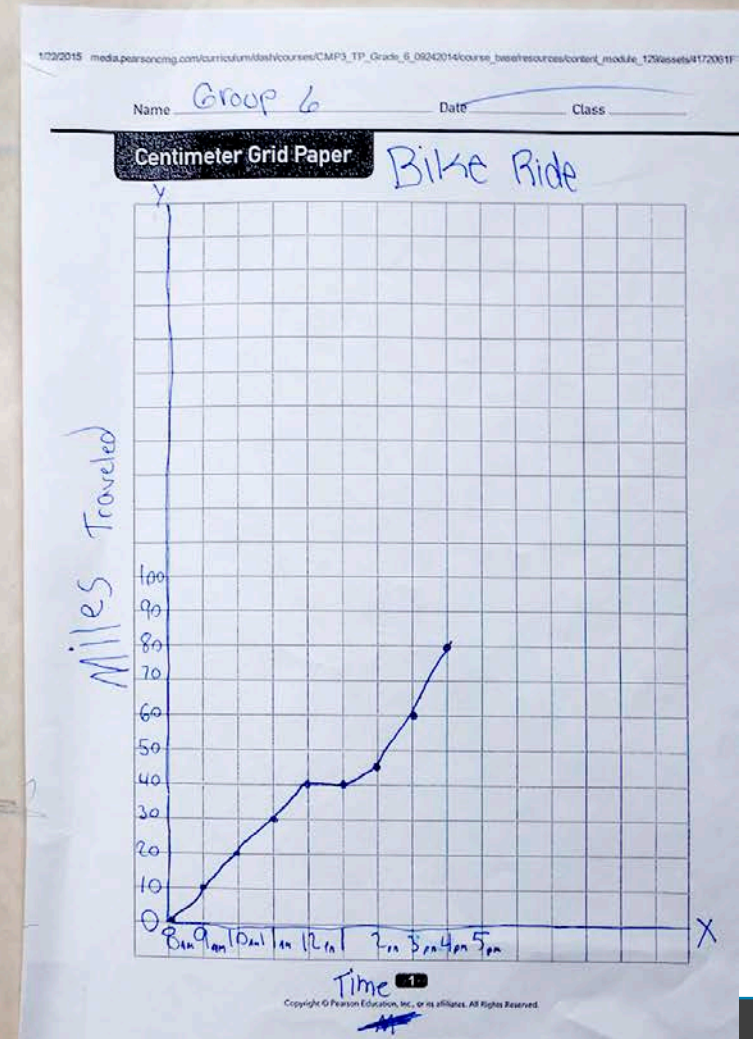




# Group B

TIME								
8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM
				STOP		STOP	Go	Stopped
0 mt	10 mt	20 mt	30 mt	40 mt	40 mt	64.5 mt	80 mt	80 MT
								<u>Biking</u>

MILES TRAVELED = MT



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# Peer Feedback for Group B

+ good graph

- graph is wrong  
and out of proportion

+ Showed braker  
and told them

- Missing 5 pm

Went by each hour 😊

could have been  
neater.

~~It was written in  
Blue and it was  
in a black thing.~~  
+ Its very organized

- They didnt me it even

table more G1  
counting by 5's are  
better

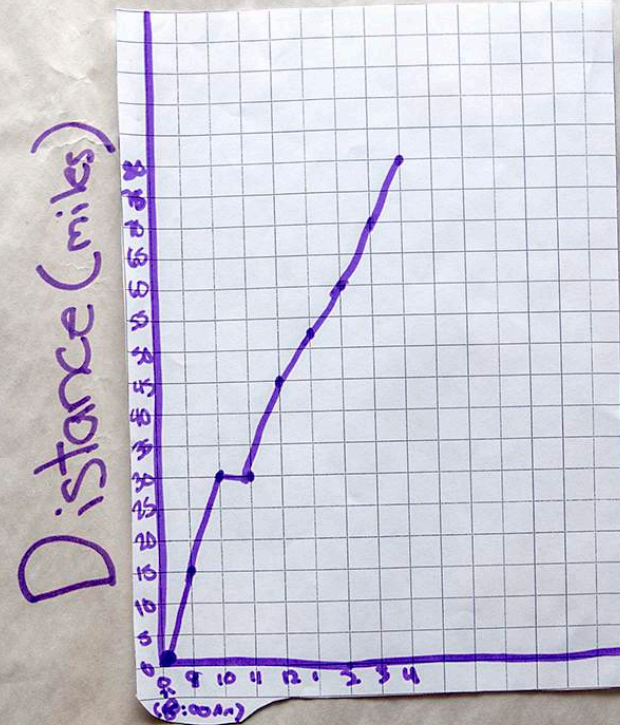




# Chart

Time	8:00	10:00	12:00	2:00	4:00
Distance (Miles)	0	30	45	60	80

# Graph



Time

(clockwise)

# Group C







# Peer Feedback for Group C

+ Good distance increments

- Every hour would give better data (on table)

Everything is labeled well and the bad thing is they skipped sometimes.

Didn't go all the way to a hours.

Spaced out distance Good.

- skipped hours. half of 80 is 40

+ the graph is correct

+ Graph is made well

- put A.M. and P.M.





# Table

Time	Distance
8:00 am	20 mi
9:00 am	25 mi
10:00 am	30 mi
11:00 am	35 mi
12:00 pm	40 mi Half way there
1:00 pm	50 mi
2:00 pm	60 mi
3:00 pm	70 mi
4:00 pm	80 mi Done

# Graph



**Group D**







# Peer Feedback for Group D

like how you organize  
your Table 😊

You didn't say what  
you were going by  
in time and you  
didn't include breaks  
- group 2

#5 + they really made it  
clear when they were half way  
and done

= The graph confused me,

+  
- started at 8 so  
could not have traveled  
that far so everything  
messed up, did not include  
lunch break

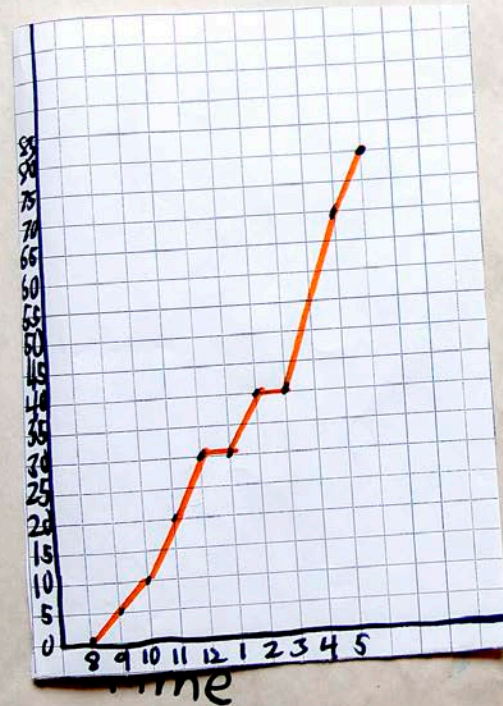
+ showed half way

- Didn't include  
breaks



# From Lewes to Chincoteague

Distance (miles)



Time	8am	9am	10am	11am	12pm	1pm
Distance (miles)	0	5	10	<del>30</del> (20)	<del>40</del> (30)	<del>50</del> (30)
	2pm	3pm	4pm	5pm		
	40	40	70	80		

**Group E**







# Peer Feedback for Group E

+ good graph and table

- not 2 breaks

Not neat  
graph table  
separated well

Group 4 = It looks like they  
did nothing: at 12:00pm 1:pm  
and in 2pm and 3pm

Didn't go to 9 hours

good separation

Group 2

Make table and  
graph more understandable

Why is There 2  
Breaks in the  
graph.



# Group F

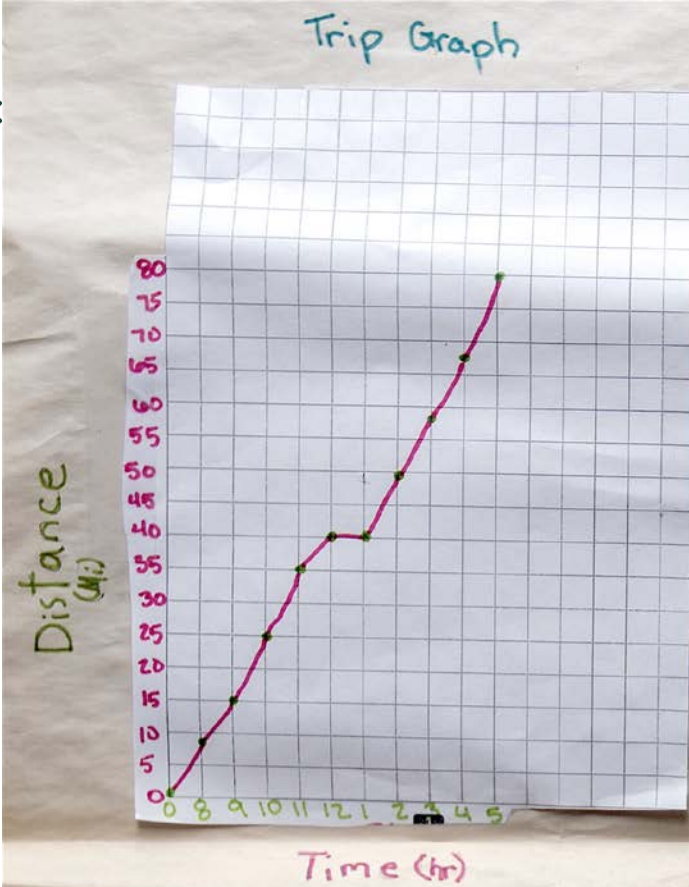


Table: Chincoteague

Time (hr)	8	9	10	11	12	1	2	3	4	5
Distance (mi)	8	15	25	35	40	40	49	58	67	80







# Peer Feedback for Group F

- Why does your table distance start @ 8?  
- Forgot Graph title

How did you get your # of distance for each hour?

How can you start @ 8:00 and already have 8m (did they sleepwalk)?

- How did you figure out how many miles they traveled per hour?

You kept the numbers at a steady rate

Good graph/  
Table  
Graph goes at an understandable rate





# Group G

Time	8:00 am	10:00 am	Noon	2:00 pm	4:00 pm	6:00 pm
Distance	0	20	40	<del>20</del> 60	<del>20</del> 70	80



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# Peer Feedback for Group B

Why is the distance  
Steady?  
at noon does not  
show they stoped


~~Why~~ where is the  
title on table?

why did you go  
by every 2 hours?  
How did you get your  
#s for the distance?

They counted  
by 2 on time

- Why does it go until 6:00?
- Breaks?
- Why by 2 hours?
- Why is the distance at  
a steady rate?

Why does the  
table go until  
6pm?

- It said they  
only traveled  
for 8 hours,  
not 12. 



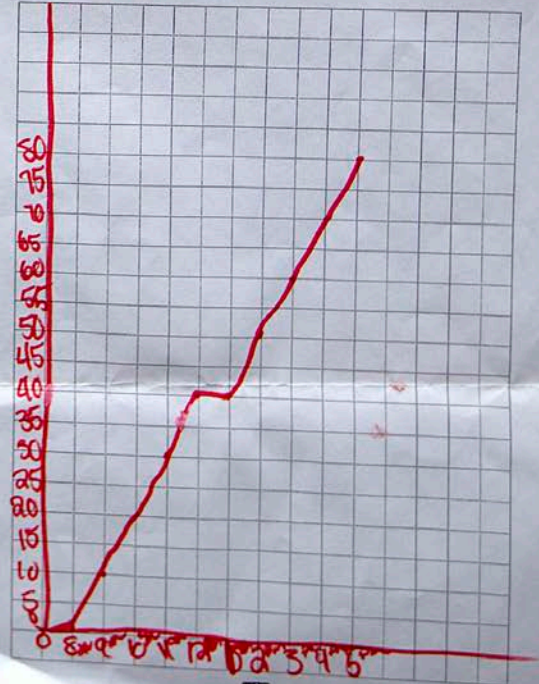


Time	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM
Distance	0	10	20	30	40	40	50	60	70	80

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Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

Centimeter Grid Paper



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# Group H





# Peer Feedback for Group H

What would  
the title  
of the  
table be?

- title for graph?
- why does it go to 5:00?
- no breaks?

No title of  
graph!

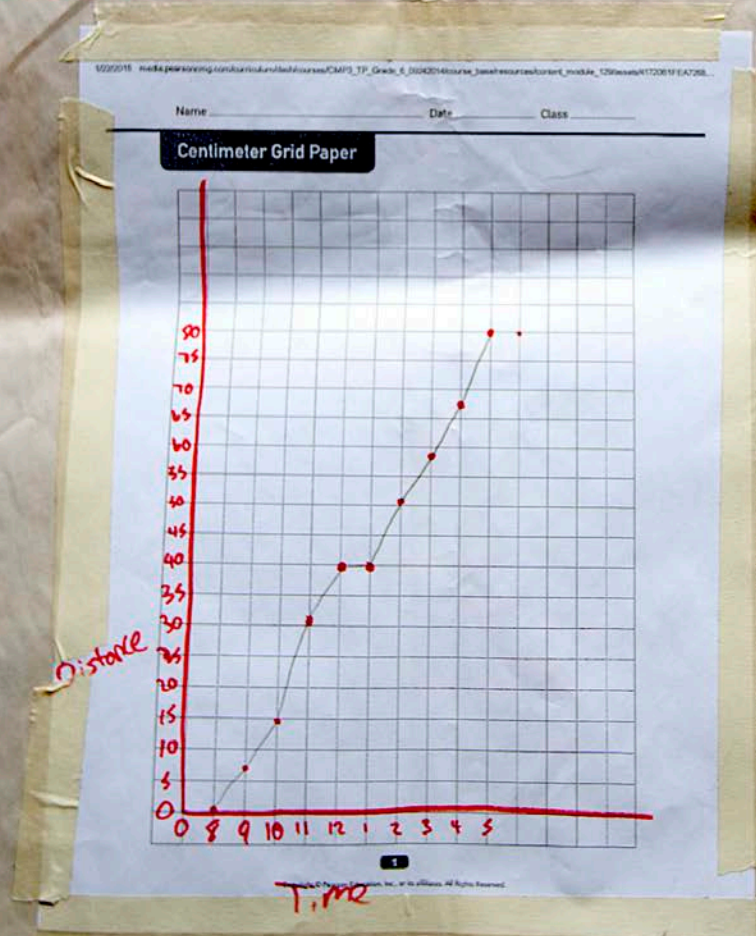
No graph title?  
No page title?  
Why did you go  
by every hour?

Why is there a steady  
rate?





Time (H)	8 <sup>am</sup>	9 <sup>am</sup>	10 <sup>am</sup>	11 <sup>am</sup>	12 <sup>pm</sup>	1 <sup>pm</sup>	2 <sup>pm</sup>	3 <sup>pm</sup>	4 <sup>pm</sup>	5 <sup>pm</sup>
Distance(m)	0	7	15	31	40	40	51	59	67	80



GROUP  
**Group I**







# Peer Feedback for Group

+ The graph is good /  
very neat

- the table is messy

Graph is very organized

Didn't go to a hours

table is messy

- graph

~~4 = total two breaks~~  
went up different  
amounts each time  

---

Subbed too

Why does the  
Time go To

5:00

---

+ Graph is labeled  
good