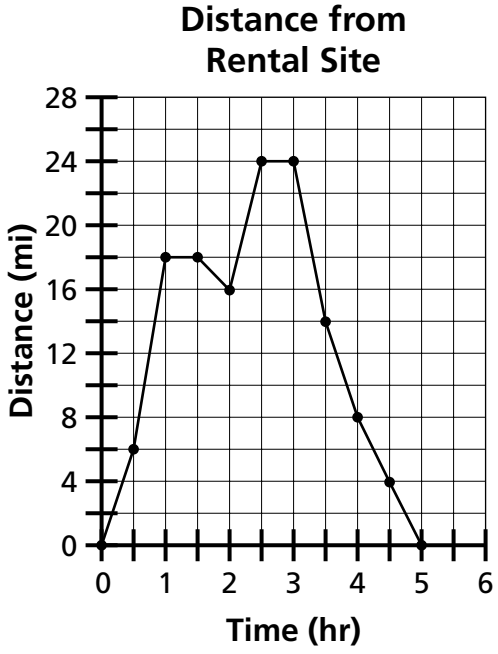
EXPLORATION

1-9 Interpreting Graphs and Tables

Graphs and tables can be used to represent many different situations.

Carmen rented a bicycle. The graph shows how far away she is from the rental site after each half hour of riding.

1. Use the graph to describe Carmen's trip. You can start the description like this: "In the first half hour, Carmen rode the bike for 6 miles. In the second half hour, she increased her speed because…"



2. Complete the table to show her location at each half hour.

Time (hr)	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Location											

Think and Discuss

3. Explain how the graph shows how fast Carmen was riding.

4. Determine during which half hour Carmen was riding fastest.

This page is available as a transparency.

Name _____ Date _____ Class _____

LESSON 1-9

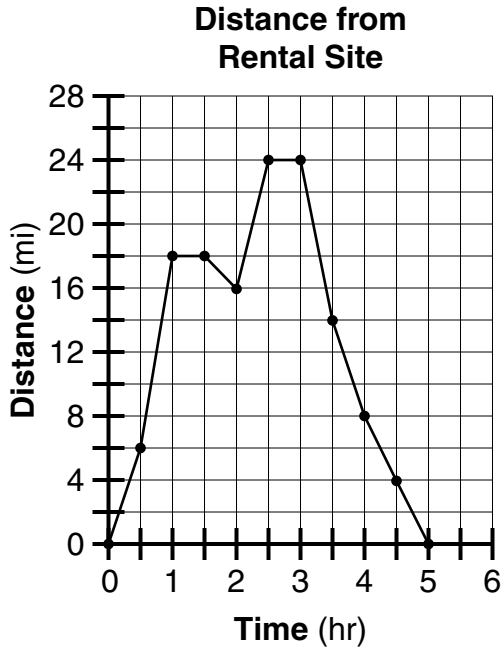
Exploration Recording Sheet

Interpreting Graphs and Tables

Graphs and tables can be used to represent many different situations.

Carmen rented a bicycle. The graph shows how far away she is from the rental site after each half hour of riding.

1. Use the graph to describe Carmen's trip. You can start the description like this: "In the first half hour, Carmen rode the bike for 6 miles. In the second half hour, she increased her speed because…"



2. Complete the table to show her location at each half hour.

Time (hr)	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Location											

Think and Discuss

3. **Explain** how the graph shows how fast Carmen was riding.

4. **Determine** during which half hour Carmen was riding fastest.

Name _____ Date _____ Class _____

LESSON 1-9

Practice A

Interpreting Graphs and Tables

The table gives the speed of three dogs in mi/h at the given times. Tell which dog is described in each situation.

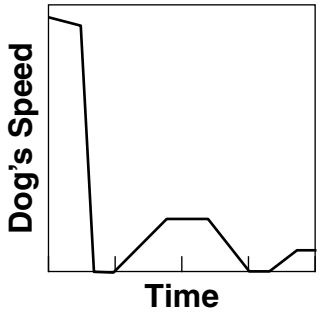
Time	8:00	8:01	8:02	8:03	8:04
Dog 1	0	1	45	0	7
Dog 2	0	16	0	14	13
Dog 3	24	0	5	0	2

1. Autumn's dog chases after a car passing by their house, then stands and barks. The dog then trots back to the yard where Autumn puts the dog on a leash and they walk together on the sidewalk. _____

2. Jordan's dog is sleeping when the family decides to go to the park. The dog awakes and moves about, wagging its tail. The family and the dog get in the car and drive a short distance to the park. At the park, Jordan runs with the dog. _____

Tell which graph corresponds to each situation in Exercises 1–2

3.



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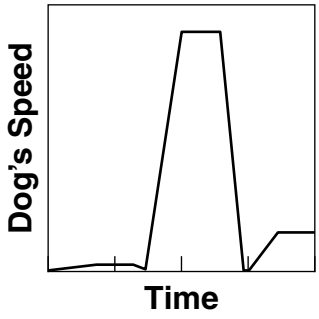
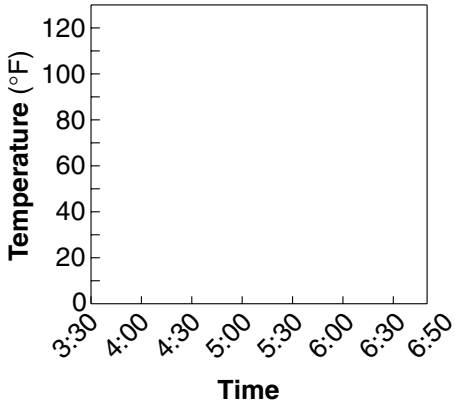
4.



_____

5. Make a graph that shows the temperature inside the car at different times.

Location	Temperature on Arrival	Temperature on Departure
Home	—	120° at 3:30
Post Office	65° at 3:40	88° at 3:55
Game	61° at 4:15	95° at 6:10
Supermarket	58° at 6:30	72° at 6:50



Name _____ Date _____ Class _____

LESSON 1-9

Practice B

Interpreting Graphs and Tables

The table gives the speed of three dogs in mi/h at the given times. Tell which dog corresponds to each situation described below.

Time	5:00	5:01	5:02	5:03	5:04
Dog 1	0	1	12	0	0
Dog 2	5	23	4	0	0
Dog 3	14	0	18	2	9

1. Leshaan walks his dog. Then he lets the dog off the leash and it runs around the yard. Then they go into the house and the dog stands eating from his dog dish and drinking from his water bowl.

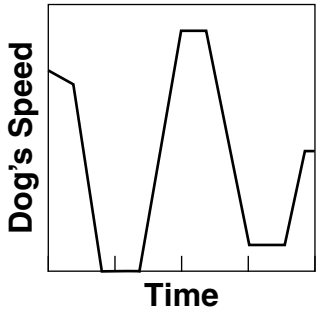
_____

2. Luke's dog is chasing its tail. Then it stops and pants. The dog then runs to the backyard fence and walks along the fence, barking at a neighbor. Then it runs to Luke at the back door.

_____

Tell which graph corresponds to each situation in Exercises 1–2.

3.



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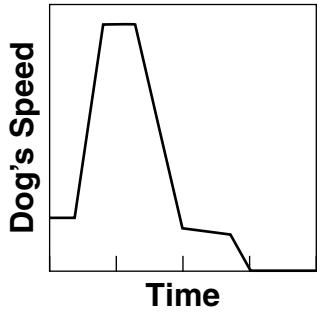
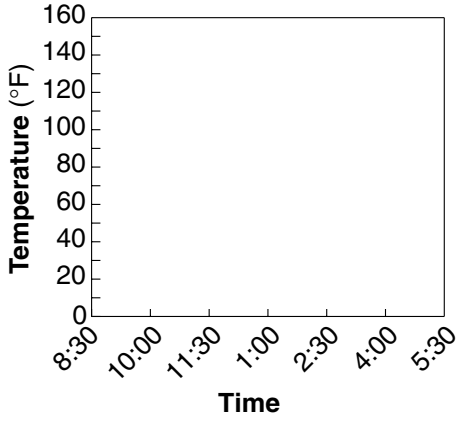


_____

5. Create a graph that illustrates the temperature inside the car.

Location	Temperature on Arrival	Temperature on Departure
Home	—	74° at 8:30
Summer job	77° at 9:00	128° at 12:05
Pool	92° at 12:15	136° at 2:30
Library	95° at 2:40	77° at 5:10



Name _____ Date _____ Class _____

LESSON 1-9

Practice C

Interpreting Graphs and Tables

The table gives the speed of three animals in mi/h at the given times. Tell which animal corresponds to each situation described below.

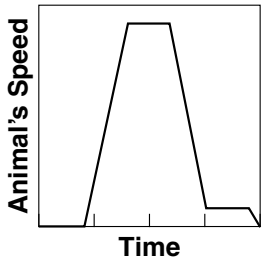
Time	5:00	5:01	5:02	5:03	5:04
Animal 1	0	0	11	1	0
Animal 2	0	7	0	32	0
Animal 3	0	17	0	14	5

1. A pig sits in the mud, then chases after another pig. It then walks back to the mud puddle and sits down. _____

2. A rabbit sits in the yard. It then hops across the yard. It stops when it sees something move. Then it runs across the yard and darts into some shrubs and stays there. _____

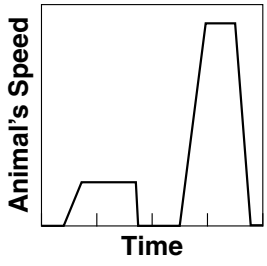
Tell which graph corresponds to each situation in Exercises 1–2.

3.



_____

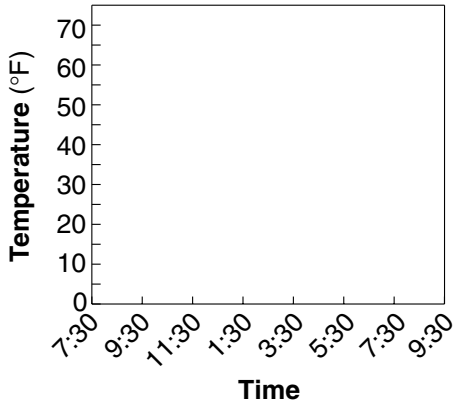
4.



_____

5. Create a graph that illustrates the temperature inside the car.

Location	Temperature on Arrival	Temperature on Departure
Home	—	17° at 7:30
Work	65° at 8:00	32° at 5:00
Restaurant	57° at 5:15	32° at 6:15
Theater	58° at 6:30	24° at 9:30



Name _____ Date _____ Class _____

LESSON 1-9

Reteach

Interpreting Graphs and Tables

Tell which table best corresponds to the given situation.
Situation: Mr. Savoy begins math lessons by going over yesterday's homework assignment. The class discussion about the new topic is lengthy. The remaining class time is spent in group work.

Table 1

Activity	Minutes
Review	12
New topic	24
Group work	24

Table 2

Activity	Minutes
Review	12
New topic	36
Group work	12

Table 3

Activity	Minutes
Review	12
New topic	15
Group work	33

Focus on review. Since all three tables indicate the same time for review, no tables can be eliminated. More time is spent on the new topic than on group work. Eliminate Table 1 since equal time is spent on each. Eliminate Table 3 since more time is spent on group work than on the new topic. So, Table 2 best corresponds to the given situation.

Which table best corresponds to the given situation?

At home today, Tim spent two hours on his schoolwork.
He had no science homework today.
His French assignment was to go over the errors made on yesterday's test.
Tim had only one minor error on that test.
Tomorrow is a math quiz and Tim is confident about the current topic.
Tim needed to do some research for his civics report, due tomorrow.

Table 1

Subject	Minutes
Civics	30
French	60
Math	30
Science	0

Table 2

Subject	Minutes
Civics	20
French	5
Math	100
Science	0

Table 3

Subject	Minutes
Civics	90
French	5
Math	30
Science	0

1. No table can be eliminated based on science time, since _____.

2. The French review should not have taken long, so eliminate Table _____.

3. Given the circumstance, Tim would have spent more time on _____ than on _____.

4. So, the table that best corresponds is Table _____.

Name _____ Date _____ Class _____

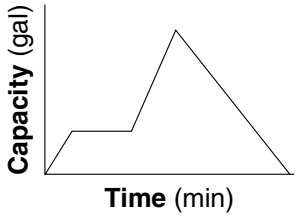
LESSON 1-9

Reteaching

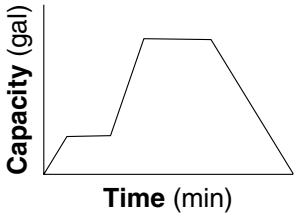
Interpreting Graphs and Tables (continued)

Tell which graph best corresponds to the given situation.
Situation: James is going to take a bath. After letting only hot water into the tub, he turns off the faucet while he is shaving. Then he adds warm water until the tub is three-quarters full. He takes a bath and empties the tub.

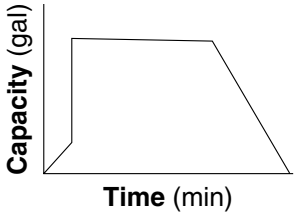
Graph 1



Graph 2



Graph 3

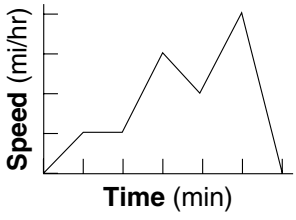


The graph should show two intervals when the amount of water in the tub remains constant: when James was shaving and when he was bathing. Eliminate Graphs 1 and 3 since each has only one interval when the amount of water in the tub remains constant. So, Graph 2 best corresponds to the given situation.

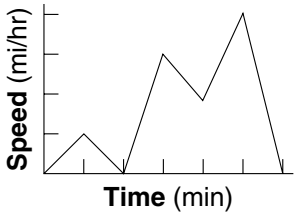
Which graph best corresponds to the given situation?

A car on a dino-coaster ride for children climbs to the top of a hill. At the top of the hill, it slows down and comes to a stop. It goes down the hill, and then starts up another hill. It goes down the second hill and then comes to the end of the ride.

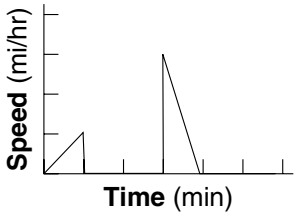
Graph 1



Graph 2



Graph 3



5. In the situation, the car comes to a stop _____ time(s) before the end of the ride.

6. When the car is stopped, the speed is _____ miles per hour.

7. Since it does not reach the stopping speed before the end of the ride, eliminate Graph _____.

8. Since the car comes to a stop only once before the end of the ride, eliminate Graph _____.

9. So, the graph the best corresponds is Graph _____.

Name _____ Date _____ Class _____

LESSON 1-9

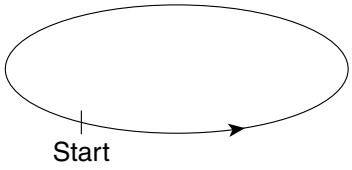
Challenge

Slow: Curve Ahead

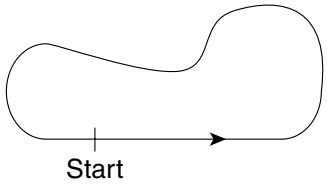
For each racecourse in Column 1, write the letter of the corresponding graph in Column 2.

Column 1

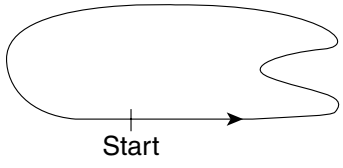
1.



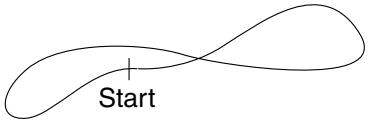
2.



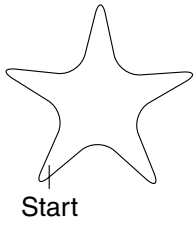
3.



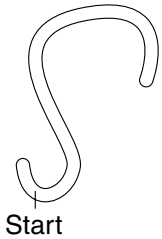
4.



5.

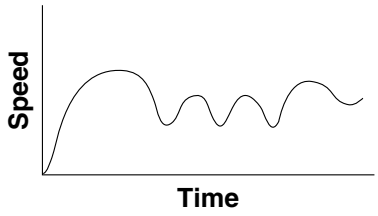


6.

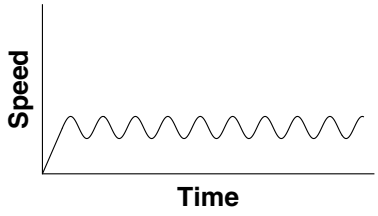


Column 2

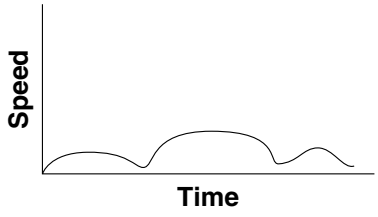
a.



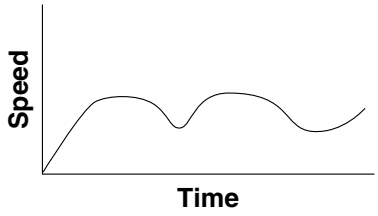
b.



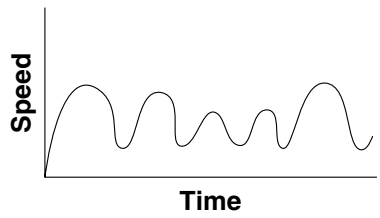
c.



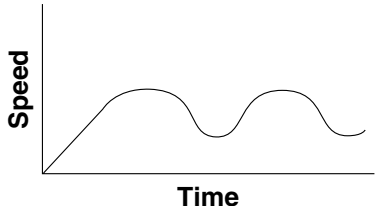
d.



e.



f.



Name _____ Date _____ Class _____

LESSON 1-9

Problem Solving

Interpreting Graphs and Table

Tell which table corresponds to each situation.

1. Ryan walks for several blocks, and then he begins to run. After running for 10 minutes, he walks for several blocks and then stops.

_____

2. Susanna starts running. After 10 minutes, she sees a friend and stops to talk. When she leaves her friend, she runs home and stops.

_____

3. Mark stands on the porch and talks to a friend. Then he starts walking home. Part way home he decides to run the rest of the way, and he doesn't stop until he gets home.

_____

Table 1

Time	Speed (mi/h)
8:00	0
8:10	3
8:20	7.5
8:30	0

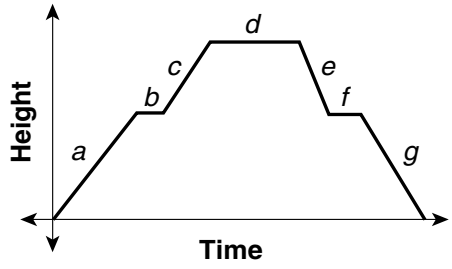
Table 2

Time	Speed (mi/h)
8:00	3
8:10	7.5
8:20	3
8:30	0

Table 3

Time	Speed (mi/h)
8:00	7.5
8:10	0
8:20	7.5
8:30	0

The graph represents the height of water in a bathtub over time. Choose the correct letter.



4. Which part of the graph best represents the tub being filled with water?

A a **C** c

B d **D** g

5. Which part of the graph shows the tub being drained of water?

A c **C** d

B e **D** g

6. Which part of the graph shows someone soaking in the tub?

F b **H** d

G e **J** f

7. Which part of the graph shows when someone gets into the tub?

A a **C** c

B e **D** f

8. Which parts of the graph show when the water level is not changing in the tub?

F a, b, c **H** b, d, g

G b, d, f **J** c, e, f

Name _____ Date _____ Class _____

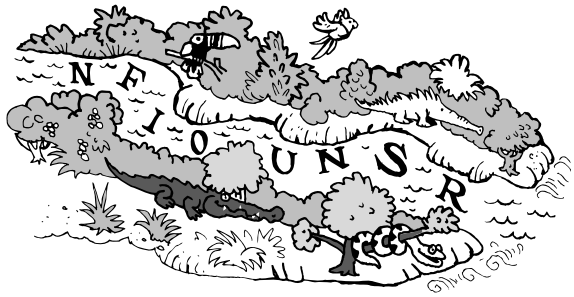
Puzzles, Twisters & Teasers

LESSON 1-9

As the River Flows

How many thousand miles does the Amazon River flow before emptying into the Atlantic Ocean?

Circle the letters in the river for each correct answer choice.



Square tables are put in a straight line. All tables touch adjoining tables. Putting 2 tables together seats 6 people. Adding another table seats 8 people.

1. Which chart shows the number of people who can sit at 4 tables?

F

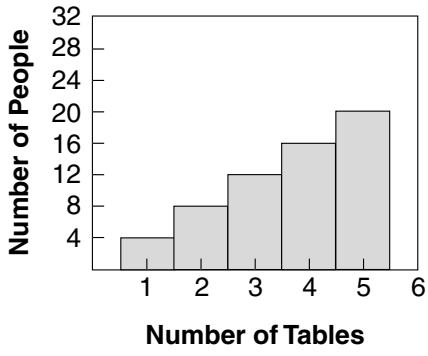
Number of Tables	1	2	3	4	5
Number of Seats	4	6	8	10	12

S

Number of Tables	1	2	3	4	5
Number of Seats	4	8	12	16	20

2. Which bar graph shows the number of people who can sit at 5 tables?

I



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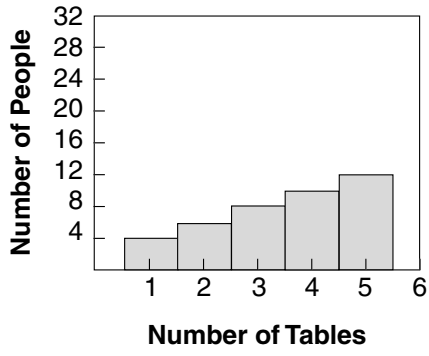

Paul rides a bike from a constant speed on level ground up a steep hill, slows to a stop for a break, and then rides home down the hill.

3. Which part of the graph of time versus speed would be a horizontal segment above the horizontal axis?

U

riding at a constant speed

N

taking a water break

4. Which part of the graph of time versus speed would be increasing from left to right?

R

riding down a steep hill

N

riding up a steep hill