NAME_____ DATE_____ CLASS_____

STUDY GUIDE Chapter 3

Describing Motion

In each of the following statements, a term has been scrambled. Unscramble the term and write it on the line provided.

_____ 1. When something moves, it changes *iitsopon.*

_____ *2. Otoinm* can be described as a change in position,

_____ 3. Speed is the *etra fo neahgc* in position.

_____ *4, Sttananuoseni eedps is* the rate of motion at any given instant.

_____ 5. A speed that doesn't vary is called a *tntnsocs dspee.*

_____ 6. The total distance traveled divided by the total time of travel is called the *evraage pesed.*

_____ 7. A *miet-nasidtce* graph makes it possible to "see" the motion of an object over a period of time.

Now find each unscrambled term in the hidden word puzzle below. The terms can be written horizontally, vertically, *or diagonally and forward or backward. Circle each term as you find it*

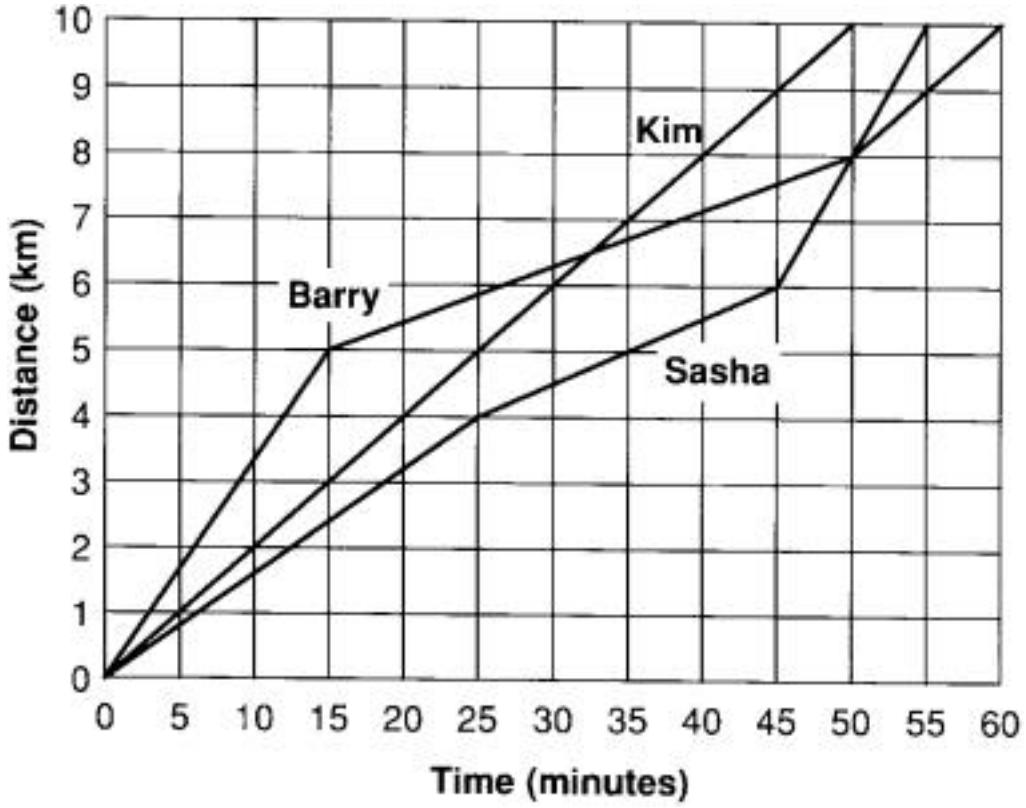
H Z I P L Q E F O N T Q S B D
C O N S T A N T S P E E D Z B
P B S R F P A Z A C G Y B F X
M O T I O N O A C E B X G D A
R O A M G T O S Z R H A G F Y
G O N N E I N H I A X F B Z D
G T T Q H M O L B T B X C B A
L Y A Z M E G S O E I I E I S
T C N Y P D B B I O M O A C X
M P E L P I I F M F B D N J J
Q C O C I S M I Q C I K P C X
O F U B N T P M C H P O M B A
C P S P O A F P F A O S N N G
E L S F C N C C N N D V A O E
F L P O J C J G A G D G I S T
D E E P S E G A R E V A E O S
G S E F B N L O O N Q T H P Q
Z R D G K C D N B G C E A L R

NAME_____ DATE_____ CLASS_____

REINFORCEMENT Chapter 3

Describing Motion

Sasha, Kim, and Barry decided to have a 10-km bicycle race after school. They asked the coach to show them how far 10 km was on the school track. They then had their race on the track. Their race results are shown on the time-distance graph below. Use this graph to fill in the table of race results , calculate average speeds, and answer the questions.



Race Results			
Cyclist	**Total distance**	**Total time**	**Average speed**
Kim			
Sasha			
Barry			

1. Which cyclist kept a constant speed during the entire race? What was this Speed?_____

_____

2. Which cyclist won the race? What was the winning time?_____

3. Which cyclist placed second in the race? What was second place time?_____

_____

4. Which cyclist placed last? What was last place time?_____

5. Which cyclist started off fastest?_____

NAME_____ DATE_____ CLASS_____

ENRICHMENT Chapter 3

Describing Motion

SPEED TRAP

The speed limit in most school areas is 20 miles per hour. How often have you seen cars that appear to be traveling faster than 20 mph in front of your school?

Design an experiment to measure the average speed of cars traveling in the 20 mph speed zone in front of your school. **CAUTION:** Do *not go into the street. Do not distract the driver's attention.*

1. List the procedures you will perform_____

2. Design a data table to record your data.

Questions and Analysis

1. What is the correct unit for speed in SI units?_____

2. What is 20 mph equal to in kilometers per hour? In meters per second?

3. Your experiment measured the average speed of each car. How could you change your experiment to approximately measure the instantaneous speed of each car?_____

4. Find the average of the average speeds of the cars in your experiment. Are cars traveling the legal speed limit? If they are not, what would you do?_____