Name _____ Date _____ Class _____

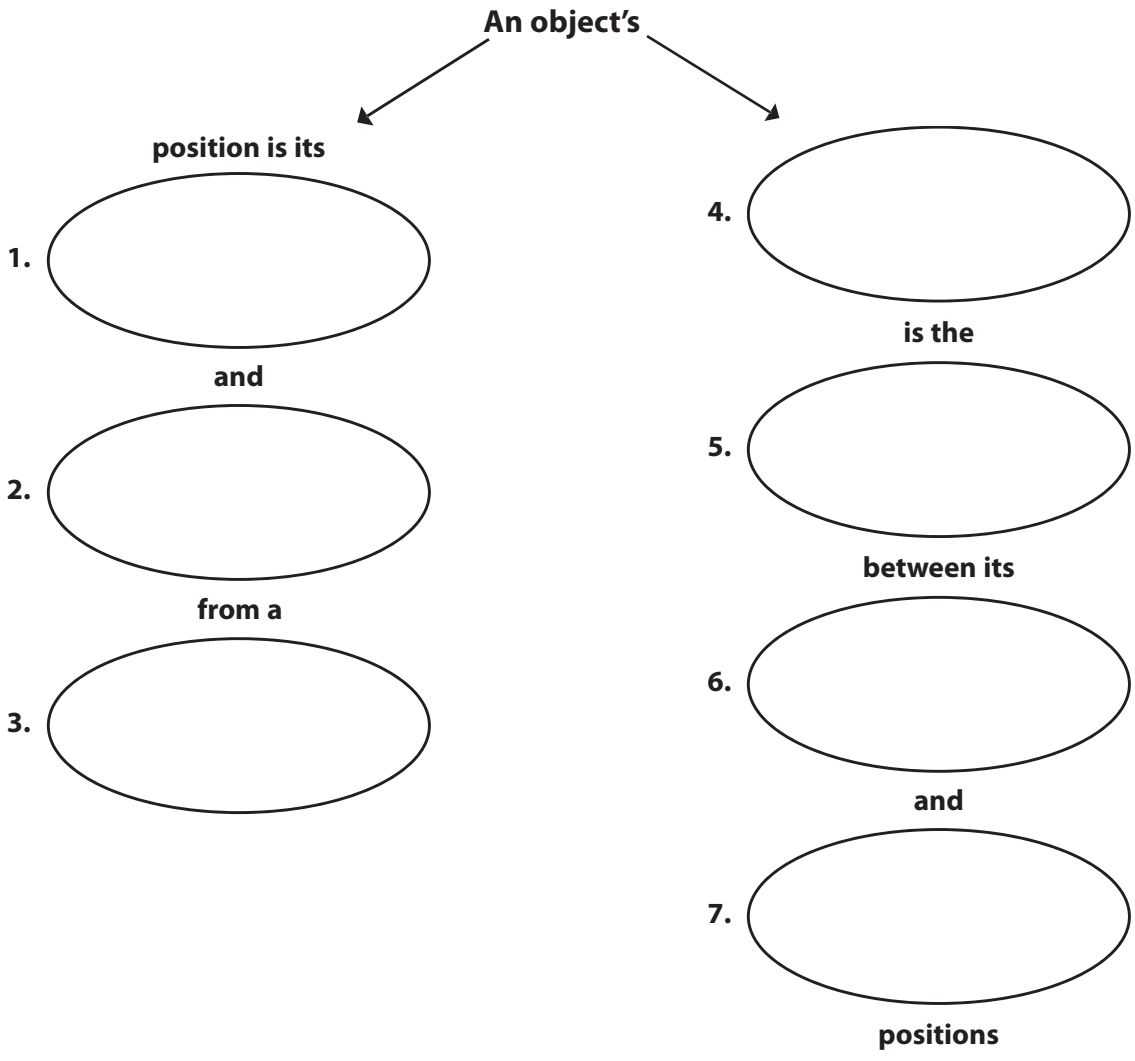
Content Practice A

LESSON 1

Position and Motion

Directions: *Complete this concept map by choosing terms from the word bank and writing them in the correct spaces. Each term is used only once.*

difference	**direction**	**displacement**	**distance**
final	**initial**	**reference point**	



Directions: *On each line, write the term that correctly completes each sentence.*

8. The terms _____ and _____ can be useful when giving opposite directions from a reference point.

9. The process of changing positions is _____.

10. _____ is the length of a path taken, whereas _____ is the difference between starting and ending locations.

Name _____ Date _____ Class _____

Content Practice B

LESSON 1

Position and Motion

Directions: *Complete these paragraphs by writing the correct terms on the lines. Some terms might be used more than once.*

To describe an object's **(1.)** _____, you must first choose a(n) **(2.)** _____ as a starting place. From there, you must specify the **(3.)** _____ to the object and the **(4.)** _____ in which it lies from the starting place. If you are giving directions to two objects located in different directions from the same **(5.)** _____, it can sometimes be helpful to describe one object as being in the **(6.)** _____ direction from that place and the other in the **(7.)** _____ direction.

An object is in **(8.)** _____ any time its **(9.)** _____ is changing. In most cases, such a change involves changes in **(10.)** _____ and **(11.)** _____ from the starting point. However, if an object returns to its starting point, its **(12.)** _____ is zero, even though it might have traveled a considerable **(13.)** _____.

Name _____ Date _____ Class _____

Content Practice A

LESSON 2

Speed and Velocity

Directions: *On each line, write the term from the word bank that correctly completes each sentence. Each term is used only once.*

average	**constant**	**direction**	**distance**	**horizontal**
instantaneous	**steep**	**time**	**velocity**	

1. Speed is a measure of the _____ an object travels in a unit of _____.

2. When a moving object's change of position is equal in every second, it is moving at a(n) _____ speed.

3. An object's speed at any particular moment is its _____ speed.

4. Its speed for the entire duration that it is in motion from one place to another is its _____ speed.

5. A(n) _____ line on a distance-time graph shows a fast speed.

6. A(n) _____ portion on a distance-time graph shows a period of no motion.

7. The _____ of a moving object includes its speed and _____.

Name _____ Date _____ Class _____

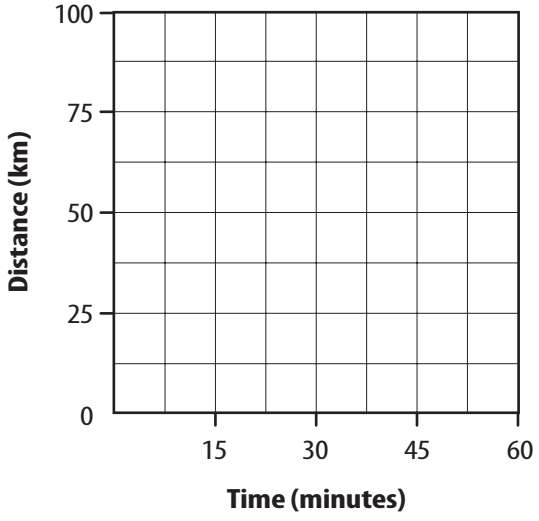
Content Practice B

LESSON 2

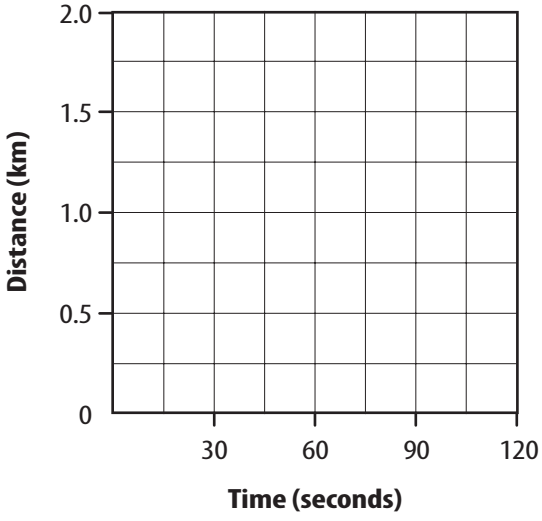
Speed and Velocity

Directions: *Draw a line on each of the time-distance graphs below as instructed.*

1



2



1. Show a car's constant speed of 75 km/h on a city street.

2. Show the motion of a car that travels for 30 seconds on a highway at a speed of 2 km/h, pulls off on the shoulder and stops for half a minute, and then resumes its trip at half its previous speed.

Directions: *Answer each question on the lines provided.*

3. What is an object's velocity?

4. What are three ways that an object can change its velocity?

Name _____ Date _____ Class _____

Content Practice A

LESSON 3

Acceleration

Directions: *On each line, write the term from the word bank that correctly completes each sentence. Each term is used only once.*

backward	**constant**	**decreasing**	**direction**	**forward**
increasing	**speed**	**velocity**	***x*-axis**	***y*-axis**

1. A moving object undergoes an acceleration when its _____ or _____ changes.

2. When a moving object slows down, its acceleration and _____ are in opposition.

3. When a moving object slows down, an arrow representing its acceleration flips from _____ to _____.

4. On a speed-time graph, speed is plotted on the _____, and time is on the _____.

5. On a speed-time graph, a(n) _____ speed is shown by a line going upward from the left.

6. On a speed-time graph, a(n) _____ speed is shown by a line going downward to the right.

7. On a speed-time graph, a(n) _____ speed is represented by a horizontal line.

Name _____ Date _____ Class _____

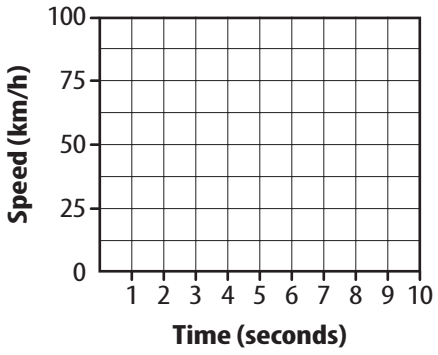
Content Practice B

LESSON 3

Acceleration

Directions: *On the speed-time graph below, draw a line showing the motion of a test car that moved forward at a speed of 50 km/h and crashed into a barrier at the 5-second mark. Continue the line for the full 10 seconds.*

1.



Directions: *Answer each question or respond to each statement on the lines provided.*

2. What is acceleration?

_____

_____

_____

3. When a moving object reduces its speed, what happens to the object's acceleration in relation to its velocity?

_____

_____

4. Why is a car rounding a curve accelerating, even if it is moving at a constant speed?

_____

_____

5. What does each letter in the following equation stand for: $a = (v_f - v_i)/t$?

_____

_____

_____