Lesson 2 Speed and Velocity

Predict *three facts that will be discussed in Lesson 2 after reading the headings. Write your facts in your Science Journal.*

Main Idea

What is speed?

I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

Details

Define speed, *and tell how it is determined.*

Definition: _____

_____

How speed is determined: _____

_____

Determine *the* speed *of each event. Draw a line to the reasonable measurement of* speed *for that event.*

person walking	245 m/s
car on highway	6.4 km/h
airplane flying	60–100 km/h

Examine constant speed, *changing* speed, *and* instantaneous speed.

Speed	Description
Constant	
Changing	
Instantaneous	

Write *the equation for calculating* average speed.

$$\text{average speed (in m/s)} = \frac{\text{\_\_\_\_\_ (in m)}}{\text{\_\_\_\_\_ (in s)}} \quad \text{or} \quad v = \frac{d}{t}$$

Determine *the* speeds *in the following scenario.*

John drives 50 km/h for one hour and 100 km/h for one hour.

instantaneous speed each hour: _____

_____

average speed for the two hours: _____

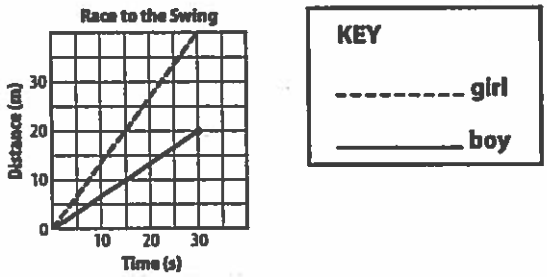
Main Idea

Distance-Time Graphs

I found this on page _____.

Details

Interpret *the distance-time graph to tell what happened in the race to the swing.*



The boy and girl start from the school door. When the _____ reaches the swing, the _____ is 30 m from the school door.

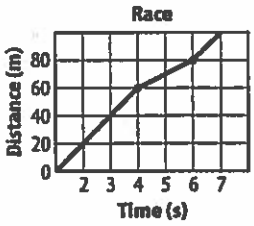
I found this on page _____.

Sequence *the 5 steps used to calculate* average speed *of an object on a distance-time graph.*

1. _____
2. _____
3. _____
4. _____
5. _____

I found this on page _____.

Calculate *the* average speed *of the runner between seconds 4 and 6 using the five steps.*



Step 1. _____

Step 2. _____

Step 3. _____

Step 4. _____

Step 5. _____

What is the runner's average speed? _____

Main Idea

I found this on page _____.

I found this on page _____.

Velocity

I found this on page _____.

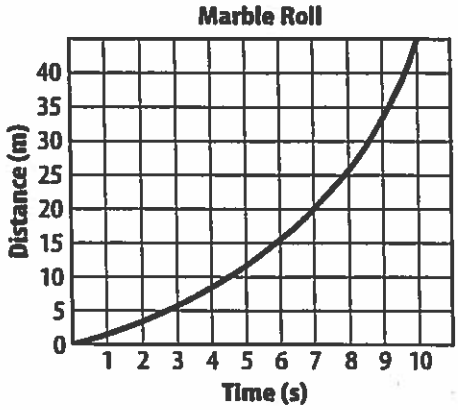
I found this on page _____.

Details

Identify *3 motions that can be shown on distance-time graphs.*

1. _____
2. _____
3. _____

Calculate *the* average speed *of the marble.*



Starting point: _____ Ending point: _____

Change in distance: _____ Change in time: _____

Average speed of the marble: _____

Define velocity.

velocity: _____

Explain *how* velocity *can change.*

Velocity changes when _____

Analyze It Explain how motion can be described using a distance-time graph.

_____

_____

_____

_____