Name _____ Class_____Date_____

Skills Worksheet

# Concept Review

## Section: Acceleration

1. **Calculate** the average acceleration of a car that changes speed from 0 m/s to 15 m/s in 5 s.

2. **Explain** why you are always accelerating when you ride a merry-go-round, even though the speed of the merry-go-round does not change.

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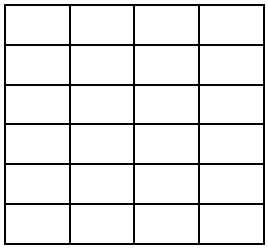
3. **Graph** the data from the table below onto a speed vs. time graph. Label both axes. Plot all the data points and draw a straight line connecting them.

**Car Speed**

| Time (s) | Speed (m/s) |
|---|---|
| 0 | 0 |
| 1 | 7.5 |
| 2 | 15.0 |
| 3 | 22.5 |
| 4 | 30.0 |



a. **Determine** the car's acceleration.

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4. **Calculate** how long it takes for a stone falling from a bridge with an average acceleration downward of 9.8 $m/s^2$ to hit the water. The stone starts from rest and hits the water with a velocity of 12.3 m/s.

5. **Identify** the straight-line accelerations below as either speeding up or slowing down.

_____ a. 0.75 $m/s^2$

_____ b. 24.8 $m/s^2$

_____ c. –3.9 $m/s^2$