**Force and Motion Study Guide Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. A cyclist travels 80 km in 8 hours. At what speed did the cyclist cycle?

|  |  |
| --- | --- |
| **given** | **work** |
|  |  |
| **answer** | |

1. Malik runs 200 m in half a minute. What must his speed have been in meters per second (m/s) to travel this distance?

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| **given** | **work** |
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| **answer** | |

1. How long (in hours) will it take a man riding a motorcycle to go 100 miles if he is driving at a velocity of 75 miles per hour (mph)?

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| **given** | **work** |
|  |  |
| **answer** | |

1. A dog runs at a speed of 3 m/s for 15 seconds. How far did he run?

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| **given** | **work** |
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| **answer** | |

1. If a jaguar, with an initial velocity of 10 m/s has a final velocity of 50 m/s after 5 seconds, what is the jaguar’s acceleration?

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| **given** | **work** |
|  |  |
| **answer** | |

1. A roller coaster car slows down as the ride comes to an end. Around the final curve, it starts at a speed of 15 m/s and slows down to a stop 5 seconds later. What is its average acceleration?

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| **given** | **work** |
|  |  |
| **answer** | |

1. A snake accelerates from 5 m/s to 30 m/s in 10 seconds. What is the snake’s average acceleration?

|  |  |
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| **given** | **work** |
|  |  |
| **answer** | |

1. Mr. Williams drives 30 miles from work at a speed of 60 mph. Mrs. Williams drives 20 miles at a speed of 20 mph. Who arrives home first?

|  |  |
| --- | --- |
| **given** | **work** |
|  |  |
| **answer** | |

**Graphing problems:**

Graph the following data using the graph to the right. Label your axes!

|  |  |
| --- | --- |
| **Time (seconds)** | **Distance (meters)** |
| **0** | **0** |
| **1** | **10** |
| **2** | **20** |
| **3** | **30** |
| **4** | **40** |
| **5** | **50** |
| **6** | **60** |

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1. **What is the average velocity? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Describe what the graph shows.**

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