**How Far**

Directions: Show the solutions (i.e. your work) to these on a separate sheet of paper.

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| 1058 m | 1. What distance will a train stop in if its initial velocity is 23 m/s and its acceleration is -0.25 m/s/s? |
| 266 m  1.0 m/s/s | 2. What distance will a car cover accelerating from 12 m/s to 26 m/s in 14 seconds? What is the acceleration? |
| 9.6 m/s  4.8 m/s  14.4 m | 3. A person starts at rest and accelerates at 3.2 m/s/s for 3.0 seconds. What is their final velocity? What is their average velocity? What distance do they cover in that time? |
| 31.36 m/s  50.2 m | 4. Steve Apt's group claimed that they fell 3.2 seconds from a cliff into the water. What was their final speed? How high was the cliff? (Use 9.8 m/s/s as the acceleration) |
| 49.1 m/s  432.6 m | 5. A car going 12.7 m/s accelerates for 14 seconds at 2.6 m/s/s. What is its final velocity? What distance does it go during that time? |
| 1.43 s  14 m/s | 6. What time will it take you to hit the water off of a 10.0 m board? What speed will you be going when you hit the water? (Use 9.8 m/s/s as the acceleration) |
| 31.5 m/s  2.67 s  -7.9 m/s/s | 7. A car slows from 42 m/s to 21 m/s over a distance of 84 m. What was the average velocity? What was the time? What was the acceleration? |
| 6.85 m/s  8.2 s  1.68 m/s/s | 8. A car accelerates from rest down a hill reaching a final speed of 13.7 m/s over a distance of 56 m. What was the average speed? What was the time? What was the acceleration? |
| 23.6 m/s | 9. A car skids to a halt in 34 m with an acceleration of 8.2 m/s/s. What was the initial velocity? |
| -0.13 m/s/s | 10. What must be the acceleration of a train in order for it to stop from 12 m/s in a distance of 541 m? |