**2.3 Quizlette – How Far - Two Part Problems Name**

**1. An airplane reaches a speed of 52.0 m/s from rest on a runway that is 890. m long. What is its speed when it has gone only 100. m down the runway?**

A. An airplane reaches a speed of 52.0 m/s from rest on a runway that is 890. m long. (solve for acceleration)

|  |  |  |  |
| --- | --- | --- | --- |
| X =  Vi =  Vf =  a =  t = |  | Formula |  |
| Show your steps |

B. What is its speed when it has gone only 100. m down the runway? (use the acceleration from part A)

|  |  |  |  |
| --- | --- | --- | --- |
| X =  Vi =  Vf =  a =  t = |  | Formula |  |
| Show your steps |

**2. A car reaches a speed of 27.0 m/s from rest in 6.20 s. What distance did it travel as it accelerated from 18.0 m/s to 24.0 m/s?**

A. A car reaches a speed of 27.0 m/s from rest in 6.20 s. (solve for acceleration)

|  |  |  |  |
| --- | --- | --- | --- |
| X =  Vi =  Vf =  a =  t = |  | Formula | 1A) a = 1.519 m/s/s, 1B) 17.4 m/s, 2A) a = 4.354 m/s/s, 2B) 28.9 m |
| Show your steps |

B. What distance did it travel as it accelerated from 18.0 m/s to 24.0 m/s? (use the acceleration from part A)

|  |  |  |  |
| --- | --- | --- | --- |
| X =  Vi =  Vf =  a =  t = |  | Formula |  |
| Show your steps |