

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)

$X =$	Formula
$V_i =$	Show your steps
$V_f =$	
$a =$	
$t =$	

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

$X =$	Formula
$V_i =$	Show your steps
$V_f =$	
$a =$	
$t =$	

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)

$X =$	Formula
$V_i =$	Show your steps
$V_f =$	
$a =$	
$t =$	

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)

$X =$	Formula
$V_i =$	Show your steps
$V_f =$	
$a =$	
$t =$	

1A) $a = 1.519 \text{ m/s}^2$, 1B) 17.4 m/s , 2A) $a = 4.354 \text{ m/s}^2$, 2B) 28.9 m