<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>1.</strong> A car having an initial speed of 16 meters per second is uniformly brought to rest in 4.0 seconds. How far does the car travel during this 4.0-second interval?</td>
<td><strong>4.</strong> An airplane originally at rest on a runway accelerates uniformly at 6.0 meters per second(^2) for 12 seconds. During this 12-second interval, the airplane travels a distance of approximately</td>
</tr>
<tr>
<td>(1) 32 m (2) 82 m (3) 96 m (4) 4.0 m</td>
<td>(1) 72 m (2) 220 m (3) 430 m (4) 860 m</td>
</tr>
<tr>
<td><strong>2.</strong> A truck with an initial speed of 12 meters per second accelerates uniformly at 2.0 meters per second(^2) for 3.0 seconds. What is the total distance traveled by the truck during this 3.0 second interval?</td>
<td><strong>5.</strong> A skier starting from rest skis straight down a slope 50. meters long in 5.0 seconds. What is the magnitude of the acceleration of the skier?</td>
</tr>
<tr>
<td>(1) 9.0 m (2) 25 m (3) 36 m (4) 45 m</td>
<td>(1) 20. m/s(^2) (2) 9.8 m/s(^2) (3) 5.0 m/s(^2) (4) 4.0 m/s(^2)</td>
</tr>
<tr>
<td><strong>3.</strong> A runner starts from rest and accelerates uniformly to a speed of 8.0 meters per second in 4.0 seconds. The magnitude of the acceleration of the runner is</td>
<td><strong>6.</strong> An object with an initial speed of 4.0 meters per second accelerates uniformly at 2.0 meters per second(^2) in the direction of its motion for a distance of 5.0 meters. What is the final speed of the object?</td>
</tr>
<tr>
<td>(1) 0.50 m/s(^2) (2) 2.0 m/s(^2) (3) 9.8 m/s(^2) (4) 32 m/s(^2)</td>
<td>(1) 6.0 m/s (2) 10. m/s (3) 14 m/s (4) 36 m/s</td>
</tr>
</tbody>
</table>
7. The speed of a car is increased uniformly from 20. meters per second to 30. meters per second in 4.0 seconds. The magnitude of the car’s average acceleration in this 4.0-second interval is

(1) 0.40 m/s²  (2) 2.5 m/s²  
(3) 10 m/s²  (4) 13 m/s²

8. A roller coaster, traveling with an initial speed of 15 meters per second, decelerates uniformly at −7.0 meters per second² to a full stop. Approximately how far does the roller coaster travel during its deceleration?

(1) 1.0 m  (2) 2.0 m  
(3) 16 m  (4) 32 m

9. A car initially traveling at a speed of 16 meters per second accelerates uniformly to a speed of 20. meters per second over a distance of 36 meters. What is the magnitude of the car’s acceleration?

(1) 0.11 m/s²  (2) 2.0 m/s²  
(3) 0.22 m/s²  (4) 9.0 m/s²

10. A skater increases her speed uniformly from 2.0 meters per second to 7.0 meters per second over a distance of 12 meters. The magnitude of her acceleration as she travels this 12 meters is

(1) 1.9 m/s²  (2) 2.2 m/s²  
(3) 2.4 m/s²  (4) 3.8 m/s²

11. A car increases its speed from 9.6 meters per second to 11.2 meters per second in 4.0 seconds. The average acceleration of the car during this 4.0-second interval is

(1) 0.40 m/s²  (2) 2.4 m/s²  
(3) 2.8 m²/s  (4) 5.2 m/s²

12. An observer recorded the following data for the motion of a car undergoing constant acceleration.

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Speed (m/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>4.0</td>
</tr>
<tr>
<td>5.0</td>
<td>7.0</td>
</tr>
<tr>
<td>6.0</td>
<td>8.5</td>
</tr>
</tbody>
</table>

What was the magnitude of the acceleration of the car?

(1) 1.3 m/s²  (2) 2.0 m/s²  
(3) 1.5 m/s²  (4) 4.5 m/s²
1. Answer: 1
2. Answer: 4
3. Answer: 2
4. Answer: 3
5. Answer: 4
6. Answer: 1
7. Answer: 2
8. Answer: 3
9. Answer: 2
10. Answer: 1
11. Answer: 1
12. Answer: 3