

CHAPTER 2: Kinematics

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1. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of  $10 \text{ m s}^{-1}$  after  $2 \text{ s}$ .  
 (a) Calculate the acceleration of the particle.  
 (b) Calculate the distance travelled by the particle in the first  $2 \text{ s}$ .  
 (c) Calculate the time taken for the particle to reach a speed of  $20 \text{ m s}^{-1}$ .

2. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of  $10 \text{ m s}^{-1}$  after  $2 \text{ s}$ .

3. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of  $10 \text{ m s}^{-1}$  after  $2 \text{ s}$ .

<p>4. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of <math>10 \text{ m s}^{-1}</math> after <math>2 \text{ s}</math>.</p>	<p>5. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of <math>10 \text{ m s}^{-1}</math> after <math>2 \text{ s}</math>.</p>	<p>6. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of <math>10 \text{ m s}^{-1}</math> after <math>2 \text{ s}</math>.</p>
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<p>7. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of <math>10 \text{ m s}^{-1}</math> after <math>2 \text{ s}</math>.</p>	<p>8. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of <math>10 \text{ m s}^{-1}</math> after <math>2 \text{ s}</math>.</p>	<p>9. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of <math>10 \text{ m s}^{-1}</math> after <math>2 \text{ s}</math>.</p>
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10. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of  $10 \text{ m s}^{-1}$  after  $2 \text{ s}$ .

<p>11. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of <math>10 \text{ m s}^{-1}</math> after <math>2 \text{ s}</math>.</p>	<p>12. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of <math>10 \text{ m s}^{-1}</math> after <math>2 \text{ s}</math>.</p>	<p>13. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of <math>10 \text{ m s}^{-1}</math> after <math>2 \text{ s}</math>.</p>
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14. A particle moves in a straight line with constant acceleration. It starts from rest and reaches a speed of  $10 \text{ m s}^{-1}$  after  $2 \text{ s}$ .