OCR 21st Century Science (2012 spec)

**Unit P4a Statements**

Speed, Distance-time & Velocity-time graphs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | Speed can be calculated by … |  | Speed at which it is travelling at a particular instant |  |
| **2** | The instantaneous speed of an object is the … |  | That an object is stationary |  |
| **3** | The average speed is the … |  | Distance divided by time |  |
| **4** | In a distance time graph a flat line indicates … |  | That the object is travelling at a constant speed. And the steeper the line the higher the speed is |  |
| **5** | In a distance time graph a sloped like indicates … |  | Speed at which an object is travelling over a period of time |  |
| **6** | The gradient of the line in a distance time graph… |  | Can be used to calculate the speed of the object |  |
| **7** | In a velocity time graph a sloped line indicates … |  | Accelerating at a constant rate |  |
| **8** | In a velocity time graph a flat line indicates … |  | Faster the change in speed |  |
| **9** | The greater the gradient of the line, the… |  | A constant speed |  |
| **10** | Acceleration can be calculated by … |  | Slowing down |  |
| **11** | Deceleration means |  | it causes a change of momentum in the direction of the force |  |
| **12** | if a resultant force acts on an object… |  | Change in speed divided by the time taken |  |

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Speed, Distance-time & Velocity-time graphs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | Speed can be calculated by … |  | Speed at which it is travelling at a particular instant | 2 |
| **2** | The instantaneous speed of an object is the … |  | That an object is stationary | 4 |
| **3** | The average speed is the … |  | Distance divided by time | 1 |
| **4** | In a distance time graph a flat line indicates … |  | That the object is travelling at a constant speed. And the steeper the line the higher the speed is | 5 |
| **5** | In a distance time graph a sloped like indicates … |  | Speed at which an object is travelling over a period of time | 3 |
| **6** | The gradient of the line in a distance time graph… |  | Can be used to calculate the speed of the object | 6 |
| **7** | In a velocity time graph a sloped line indicates … |  | Accelerating at a constant rate | 7 |
| **8** | In a velocity time graph a flat line indicates … |  | Faster the change in speed | 9 |
| **9** | The greater the gradient of the line, the… |  | A constant speed | 8 |
| **10** | Acceleration can be calculated by … |  | Slowing down | 11 |
| **11** | Deceleration means |  | it causes a change of momentum in the direction of the force | 12 |
| **12** | if a resultant force acts on an object… |  | Change in speed divided by the time taken | 10 |