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| 1. A vector quantity has only a magnitude and no direction associated with it.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 2. Motion in a circle at constant speed is motion with constant acceleration.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 3. Motion in a circle at constant speed is motion with constant velocity.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 4. Uniform motion is any motion at constant speed.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 5. The terms *velocity* and *speed* have identical meanings in physics.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 6. If an object’s speed is constant, its velocity must also be constant.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 7. If an object’s velocity is constant, its speed must also be constant.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 8. The proper abbreviation for ‘seconds’ is ‘sec.’   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 9. The proper abbreviation for ‘grams’ is ‘g.’   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 10. The proper abbreviation for ‘kilohertz’ is ‘kHz.’   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 11. The metric prefix that means one thousand is milli-.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 12. Twenty milliseconds is 0.020 s.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 13. There are one thousand megabytes in a gigabyte.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 14. The second is a metric unit of measure.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 15. The number of cycles of a periodic process that occur per unit time is called the period.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 16. The time for one complete cycle of a periodic process to take place is called the period.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 17. The period of oscillation for a signal having a frequency of 60 Hz is 60 seconds.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 18. The maximum possible speed in nature is the speed of light.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 19. Experimenting is part of the scientific method.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 20. A body at the end of a spring oscillates up and down ten times in five seconds. The period of oscillation is 2 s.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 21. The slope of a distance vs. time graph is the acceleration.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 22. The slope of a velocity vs. time graph is the acceleration.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 23. An object moving in a circle undergoes centripetal acceleration.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 24. If an object’s acceleration is positive, its speed must be increasing.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *RATIONALE:* | It could have a negative velocity that is getting less negative, which corresponds to a *de*creasing speed. | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 25. A fast-moving body must have a larger acceleration than a slow-moving body.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 26. An aircraft approaches a runway that runs directly east as a strong wind blows out of the south. The direction that the aircraft should aim in order to land is east of north.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| The figure shows a distance versus time graph for an object. |

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| 27. The velocity of the moving object is a non-zero constant.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph (1) | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:53 PM | |

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| 28. The acceleration of the moving object is a non-zero constant.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph (1) | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:54 PM | |

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| The figure shows the distance versus time graph of an object. |

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| 29. The velocity of the moving object is a non-zero constant.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph (2) | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:54 PM | |

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| 30. The acceleration of the moving object is a non-zero constant.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph (2) | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:54 PM | |

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| The figure shows a distance vs. time graph of an object with three distinct regions, I, II, and III.  ​ |

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| 31. The object’s velocity is zero in region II.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:55 PM | |

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| 32. The object’s velocity is positive in region II.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:55 PM | |

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| 33. The object’s velocity is never negative.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:55 PM | |

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| 34. The object’s acceleration is zero only in region II.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:56 PM | |

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| 35. The object’s acceleration is negative in region III.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:57 PM | |

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| 36. The object is never at rest.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:57 PM | |

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| 37. The object’s speed is greatest in region I.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:57 PM | |

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| A ball thrown upwards reaches a maximum height and then comes back down to the original level. ​ |

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| 38. As the ball is going upwards the velocity and acceleration both point up.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball thrown upwards | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:39 PM | |

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| 39. At the peak of the motion the velocity and acceleration are both zero.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball thrown upwards | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:40 PM | |

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| 40. As the ball is going downwards the velocity and acceleration both point down.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball thrown upwards | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:41 PM | |

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| 41. When a body moves in circular motion at constant speed the velocity and acceleration point in opposite directions.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| The acceleration of a ball as it rolls down a ramp is 4 m/s2. The ball is referred to 2 s after it starts to roll. |

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| 42. The distance from the starting point is 16 m.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball rolls down a ramp | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:43 PM | |

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| 43. The velocity acquired after starting from rest is 8 m/s.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball rolls down a ramp | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:44 PM | |

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| 44. The acceleration after starting from rest is 8 m/s2.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball rolls down a ramp | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:45 PM | |

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| 45. A racecar goes around a 200 m radius curve at a constant speed of 40 m/s. Its acceleration is 8 m/s2.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | True | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 46. A racecar driver steps on the gas, changing his speed from 10 m/s to 30 m/s in 4 seconds. The acceleration of the racecar is 10 m/s2.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 47. A racecar driver steps on the gas, and his racecar travels 20 meters in 2 seconds starting from rest. The acceleration of the racecar is 5 m/s2.   |  |  |  | | --- | --- | --- | |  | a. | True | |  | b. | False |  |  |  | | --- | --- | | *ANSWER:* | False | | *POINTS:* | 1 | | *QUESTION TYPE:* | True / False | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 48. Which of these are fundamental physical quantities?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | space, time, and matter | b. | kilograms, seconds, and meters | |  | c. | length, time, and mass | d. | momentum, energy, and mass |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 49. What is the proper abbreviation for ‘seconds?’   |  |  |  | | --- | --- | --- | |  | a. | sec | |  | b. | There is none. It should always be spelled out. | |  | c. | secs | |  | d. | s | |  | e. | none of the above |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 50. What is the proper abbreviation for ‘kilohertz?’   |  |  |  | | --- | --- | --- | |  | a. | kh | |  | b. | khz | |  | c. | Khz | |  | d. | KHz | |  | e. | kHz |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 51. What is the proper abbreviation for ‘grams?’   |  |  |  | | --- | --- | --- | |  | a. | g | |  | b. | gms | |  | c. | gm | |  | d. | gr | |  | e. | kg |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 52. Which metric prefix means one thousand?   |  |  |  | | --- | --- | --- | |  | a. | milli- | |  | b. | centi- | |  | c. | one- | |  | d. | kilo- | |  | e. | mega- |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:13 PM | |

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| 53. Twenty milliseconds is   |  |  |  | | --- | --- | --- | |  | a. | 0.00002 s. | |  | b. | 0.0002 s. | |  | c. | 0.002 s. | |  | d. | 0.02 s. | |  | e. | 20000 s. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:13 PM | |

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| 54. Fifteen microseconds is   |  |  |  | | --- | --- | --- | |  | a. | 0.0000015 s. | |  | b. | 0.000015 s. | |  | c. | 0.00015 s. | |  | d. | 0.015 s. | |  | e. | 15000000 s. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:17 PM | |

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| 55. Twenty kilometers is   |  |  |  | | --- | --- | --- | |  | a. | 200,000 m. | |  | b. | 20,000 m. | |  | c. | 2,000 m. | |  | d. | 200 m. | |  | e. | 0.02 m. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:16 PM | |

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| 56. Two microcuries is   |  |  |  | | --- | --- | --- | |  | a. | 200,000 Ci. | |  | b. | 0.0002 Ci. | |  | c. | 0.00002 Ci. | |  | d. | 0.000002 Ci. | |  | e. | 0.00000002 Ci. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:18 PM | |

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| 57. How many megabytes are there in a gigabyte?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | 10 | b. | 1000 | |  | c. | 1000000 | d. | none of the above |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 58. In expressions like Δv and Δt, Δ stands for   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | “change in”. | b. | “triangle”. | |  | c. | a constant of proportionality. | d. | a variable. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:19 PM | |

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| 59. The number of cycles of a periodic process that occur per unit time is called   |  |  |  | | --- | --- | --- | |  | a. | amplitude. | |  | b. | frequency. | |  | c. | period. | |  | d. | wavelength. | |  | e. | speed. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:20 PM | |

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| 60. The time for one complete cycle of a periodic process to take place is called   |  |  |  | | --- | --- | --- | |  | a. | amplitude. | |  | b. | frequency. | |  | c. | period. | |  | d. | wavelength. | |  | e. | speed. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:21 PM | |

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| 61. A body at the end of a spring oscillates up and down ten times in five seconds. The period of oscillation is   |  |  |  | | --- | --- | --- | |  | a. | 0.5 s. | |  | b. | 2 s. | |  | c. | 5 s. | |  | d. | 10 s. | |  | e. | not determinable. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:21 PM | |

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| 62. What is the period of a signal that has a frequency of 60 Hz?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | 60 s | b. | 60 s¯1 | |  | c. | 1/60 s | d. | not determinable |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/14/2016 2:52 PM | |

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| 63. The slope of a distance vs. time graph is the   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | distance. | b. | velocity. | |  | c. | acceleration. | d. | none of the above. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:22 PM | |

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| 64. The slope of a velocity vs. time graph is the   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | distance. | b. | velocity. | |  | c. | acceleration. | d. | none of the above |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:22 PM | |

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| 65. An object moving in a circle undergoes   |  |  |  | | --- | --- | --- | |  | a. | constant acceleration. | |  | b. | free fall. | |  | c. | centripetal acceleration. | |  | d. | linear acceleration. | |  | e. | frequency. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:23 PM | |

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| 66. Motion in a circle at constant speed is motion with   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | constant acceleration. | b. | constant velocity. | |  | c. | both of the above | d. | none of the above |  |  |  | | --- | --- | | *ANSWER:* | d | | *RATIONALE:* | Both *v* and *a* are continuously changing direction and therefore not constant. | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:23 PM | |

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| 67. An aircraft approaches a runway that runs directly east as a strong wind blows out of the south. The direction that the aircraft should point in order to land on the runway is   |  |  |  | | --- | --- | --- | |  | a. | north. | |  | b. | east of north. | |  | c. | east. | |  | d. | south of east. | |  | e. | south. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:24 PM | |

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| 68. GPS stands for   |  |  |  | | --- | --- | --- | |  | a. | the metric system of measurement. | |  | b. | grams per second. | |  | c. | Global Positioning System. | |  | d. | a space shuttle. | |  | e. | none of the above. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:24 PM | |

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| 69. Instantaneous speed and average speed are equal   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | always. | b. | for motion at constant speed. | |  | c. | for accelerated motion. | d. | never. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/14/2016 2:53 PM | |

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| 70. If the velocity of an object is negative,   |  |  |  | | --- | --- | --- | |  | a. | its speed is decreasing. | |  | b. | its velocity does not exist. | |  | c. | it is reversing direction. | |  | d. | it is moving in the direction labeled negative. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:25 PM | |

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| 71.  The sum of vectors A and B is   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. |  | b. |  | |  | c. |  | d. |  |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| The figure shows a distance versus time graph for an object. |

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| 72. The velocity of the moving object is   |  |  |  | | --- | --- | --- | |  | a. | zero. | |  | b. | constant. | |  | c. | increasing. | |  | d. | decreasing. | |  | e. | not determinable. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph (1) | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:47 PM | |

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| 73. The acceleration of the moving object is   |  |  |  | | --- | --- | --- | |  | a. | zero. | |  | b. | constant. | |  | c. | increasing. | |  | d. | decreasing. | |  | e. | not determinable. |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph (1) | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:48 PM | |

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| The figure shows the distance versus time graph of an object. |

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| 74. The velocity of the moving object is   |  |  |  | | --- | --- | --- | |  | a. | zero. | |  | b. | constant. | |  | c. | increasing. | |  | d. | decreasing. | |  | e. | not determinable. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph (2) | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:48 PM | |

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| 75. The acceleration of the moving object is   |  |  |  | | --- | --- | --- | |  | a. | zero. | |  | b. | constant. | |  | c. | increasing. | |  | d. | decreasing. | |  | e. | not determinable. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph (2) | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:49 PM | |

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| The figure shows a distance vs. time graph of an object with three distinct regions, I, II, and III.  ​ |

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| 76. The object’s velocity is zero in region(s)   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | I. | b. | II. | |  | c. | III. | d. | no regions |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:49 PM | |

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| 77. The object’s velocity is positive in region(s)   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | I. | b. | II. | |  | c. | III. | d. | no regions |  |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:50 PM | |

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| 78. The object’s velocity is negative in region(s)   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | I. | b. | II. | |  | c. | III. | d. | no regions |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:50 PM | |

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| 79. The object’s acceleration is negative in region(s)   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | I. | b. | II. | |  | c. | III. | d. | no regions |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:50 PM | |

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| 80. The object is at rest in region(s)   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | I. | b. | II. | |  | c. | III. | d. | no regions |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:51 PM | |

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| 81. The object’s speed is greatest in region(s)   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | I. | b. | II. | |  | c. | III. | d. | no regions |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:51 PM | |

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| A ball thrown upwards reaches a maximum height and then comes back down to the original level. ​ |

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| 82. As the ball is going upwards   |  |  |  | | --- | --- | --- | |  | a. | the velocity and acceleration both point up. | |  | b. | the velocity points up and the acceleration down. | |  | c. | the velocity points down and the acceleration up. | |  | d. | the velocity and acceleration both point down. | |  | e. | the acceleration is zero. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball thrown upwards | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:46 PM | |

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| 83. At the maximum height   |  |  |  | | --- | --- | --- | |  | a. | the velocity and acceleration both point up. | |  | b. | the velocity points up and the acceleration down. | |  | c. | the velocity points down and the acceleration up. | |  | d. | the velocity and acceleration both point down. | |  | e. | the velocity is zero. | |  | f. | the acceleration is zero. |  |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball thrown upwards | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:47 PM | |

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| 84. As the ball is going downwards   |  |  |  | | --- | --- | --- | |  | a. | the velocity and acceleration both point up. | |  | b. | the velocity points up and the acceleration down. | |  | c. | the velocity points down and the acceleration up. | |  | d. | the velocity and acceleration both point down. | |  | e. | the acceleration is zero. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball thrown upwards | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:47 PM | |

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| 85. When a body moves in circular motion at constant speed   |  |  |  | | --- | --- | --- | |  | a. | the velocity and acceleration point in the same direction. | |  | b. | the velocity and acceleration point in opposite directions. | |  | c. | the velocity and acceleration point perpendicular to each other. | |  | d. | the acceleration is zero. | |  | e. | none of the above. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:49 PM | |

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| A ball is dropped from a rooftop of a building and falls for two seconds. The acceleration of gravity is 9.8 m/s2. The ball is referred to at the two-second time. ​ |

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| 86. The distance the ball is below the rooftop in meters is   |  |  |  | | --- | --- | --- | |  | a. | 0. | |  | b. | 4.9. | |  | c. | 9.8. | |  | d. | 19.6. | |  | e. | none of these. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball dropped | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:49 PM | |

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| 87. The velocity of the ball in m/s is   |  |  |  | | --- | --- | --- | |  | a. | 0. | |  | b. | 4.9. | |  | c. | 9.8. | |  | d. | 19.6. | |  | e. | none of these. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball dropped | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:49 PM | |

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| 88. The acceleration of the ball in m/s2 is   |  |  |  | | --- | --- | --- | |  | a. | 0. | |  | b. | 4.9. | |  | c. | 9.8. | |  | d. | 19.6. | |  | e. | none of these. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball dropped | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:49 PM | |

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| The acceleration of a ball as it rolls down a ramp is 4 m/s2. The ball is referred to 2 s after it starts to roll. |

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| 89. The distance from the starting point in meters is   |  |  |  | | --- | --- | --- | |  | a. | 0. | |  | b. | 2. | |  | c. | 4. | |  | d. | 8. | |  | e. | 16. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball rolls down a ramp | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:50 PM | |

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| 90. The velocity acquired after starting from rest in m/s is   |  |  |  | | --- | --- | --- | |  | a. | 0. | |  | b. | 2. | |  | c. | 4. | |  | d. | 8. | |  | e. | 16. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball rolls down a ramp | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:50 PM | |

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| 91. The acceleration in m/s2 after starting from rest is   |  |  |  | | --- | --- | --- | |  | a. | 0. | |  | b. | 2. | |  | c. | 4. | |  | d. | 8. | |  | e. | 16. |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball rolls down a ramp | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:51 PM | |

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| 92. A racecar goes around a 200 m radius curve at a constant speed of 40 m/s. Its acceleration is   |  |  |  | | --- | --- | --- | |  | a. | 0. | |  | b. | 0.2 m/s2. | |  | c. | 4 m/s2. | |  | d. | 8 m/s2. | |  | e. | 16 m/s2. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:52 PM | |

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| 93. A racecar driver steps on the gas, changing his speed from 10 m/s to 30 m/s in 4 seconds. The acceleration of the racecar is   |  |  |  | | --- | --- | --- | |  | a. | 0 | |  | b. | 2 m/s2. | |  | c. | 4 m/s2. | |  | d. | 5 m/s2. | |  | e. | 7.5 m/s2. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:53 PM | |

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| 94. A racecar driver steps on the gas, and his racecar travels 20 meters in 2 seconds starting from rest. The acceleration of the racecar is   |  |  |  | | --- | --- | --- | |  | a. | 0 | |  | b. | 5 m/s2. | |  | c. | 9.8 m/s2. | |  | d. | 10 m/s2. | |  | e. | 20 m/s2. |  |  |  | | --- | --- | | *ANSWER:* | d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 8:54 PM | |

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| 95. The maximum possible speed in nature is   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | warp 10. | b. | the speed of light. | |  | c. | infinite. | d. | unknown. |  |  |  | | --- | --- | | *ANSWER:* | b | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 9:12 PM | |

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| 96. Freely falling bodies experience   |  |  |  | | --- | --- | --- | |  | a. | motion with constant velocity. | |  | b. | motion with zero acceleration. | |  | c. | motion with constant acceleration. | |  | d. | motion at a constant speed. | |  | e. | none of the above |  |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Choice | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/14/2016 2:54 PM | |

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| 97. Which of these are physical quantities?   |  |  |  | | --- | --- | --- | |  | a. | time | |  | b. | energy | |  | c. | seconds | |  | d. | kilometers | |  | e. | volume |  |  |  | | --- | --- | | *ANSWER:* | a, b, e | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Response | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 98. Which of these are metric units?   |  |  |  | | --- | --- | --- | |  | a. | grams | |  | b. | pounds | |  | c. | seconds | |  | d. | kilometers | |  | e. | square miles |  |  |  | | --- | --- | | *ANSWER:* | a, c, d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Response | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 99. Which of these are units of measure?   |  |  |  | | --- | --- | --- | |  | a. | time | |  | b. | energy | |  | c. | seconds | |  | d. | kilometers | |  | e. | volume |  |  |  | | --- | --- | | *ANSWER:* | c, d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Response | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 100. Which of these are English units?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | seconds | b. | feet | |  | c. | kilometers | d. | slugs |  |  |  | | --- | --- | | *ANSWER:* | a, b, d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Response | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 101. The notation s−1 means the same thing as   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | 1/s. | b. | Hz. | |  | c. | per second. | d. | none of the above |  |  |  | | --- | --- | | *ANSWER:* | a, b, c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Response | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/13/2016 9:13 PM | |

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| The figure shows a distance vs. time graph of an object with three distinct regions, I, II, and III.  ​ |

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| 102. The object’s acceleration is zero in region(s)   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | I. | b. | II. | |  | c. | III. | d. | no regions |  |  |  | | --- | --- | | *ANSWER:* | a, b, c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Response | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | d vs. t graph 3 regions | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 1:52 PM | |

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| 103. Which of these are a part of the scientific method?   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | a. | hypothesis | b. | experiment | |  | c. | dogma | d. | observation |  |  |  | | --- | --- | | *ANSWER:* | a, b, d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Response | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 104. What is “uniform motion?”   |  |  |  | | --- | --- | --- | |  | a. | smooth motion | |  | b. | motion with zero acceleration | |  | c. | motion with constant velocity | |  | d. | motion at a constant speed | |  | e. | motion along a straight path |  |  |  | | --- | --- | | *ANSWER:* | b, c | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Response | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 105. Which of these objects is moving with constant velocity but changing acceleration?   |  |  |  | | --- | --- | --- | |  | a. | a rock dropped from a bridge | |  | b. | a car going around a banked curve at 40 m/s | |  | c. | an aircraft being launched off of an aircraft carrier | |  | d. | an aircraft in a banked turn at 100 m/s |  |  |  | | --- | --- | | *ANSWER:* | b, d | | *POINTS:* | 1 | | *QUESTION TYPE:* | Multiple Response | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/15/2016 12:45 PM | |

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| 106. A quantity that has only a magnitude but no direction associated with it is called a \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | scalar | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 107. A quantity that has both a magnitude and direction associated with it is called a \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | vector | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 108. The proper abbreviation for ‘seconds’ is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | s | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 109. The notation s−1 means \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | per second | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 110. The proper abbreviation for ‘kilohertz’ is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | kHz | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 111. The number of cycles of a periodic process that occur per unit time is called the \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | frequency | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 112. The time for one complete cycle of a periodic process to take place is called the \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | period | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 113. In expressions like Δv and Δt, Δ stands for \_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | change in | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 114. A body at the end of a spring oscillates up and down ten times in five seconds. The period of oscillation is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 0.5 s | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 115. The slope of a velocity vs. time graph is the \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | acceleration | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 116. The slope of a distance vs. time graph is the \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | velocity | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 117. An aircraft approaches a runway that runs directly east as a strong wind blows out of the south. The direction that the aircraft should points in order to land on the runway is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | south of east | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| A ball thrown upwards reaches a maximum height and then comes back down to the original level. ​ |

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| 118. As the ball is going upwards, the velocity points \_\_\_\_\_\_\_\_\_\_ and the acceleration points \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | up, down | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball thrown upwards | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:52 PM | |

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| 119. At the peak of the motion, the velocity is \_\_\_\_\_\_\_\_\_\_ and the acceleration points \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | zero, down | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball thrown upwards | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:52 PM | |

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| 120. As the ball is going downwards, the velocity points \_\_\_\_\_\_\_\_\_\_ and the acceleration points \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | down, down | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball thrown upwards | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:53 PM | |

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| 121. When a body moves in circular motion at constant speed, the velocity and acceleration point \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | perpendicular to each other | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 122. If an object’s acceleration is nonzero, its velocity must be \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | changing | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| A ball is dropped from a rooftop of a building and falls for two seconds. The acceleration of gravity is 9.8 m/s2. The ball is referred to at the two-second time. ​ |

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| 123. The ball is referred to at the two-second time. The distance below the rooftop is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 19.6 m | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball dropped | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:53 PM | |

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| 124. The ball is referred to at the two-second time. The velocity is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 19.6 m/s | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball dropped | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:54 PM | |

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| 125. The ball is referred to at the two-second time. The acceleration is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 9.8 m/s2 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball dropped | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:54 PM | |

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| The acceleration of a ball as it rolls down a ramp is 4 m/s2. The ball is referred to 2 s after it starts to roll. |

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| 126. The distance from the starting point is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 8 m | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball rolls down a ramp | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:55 PM | |

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| 127. The acceleration after starting from rest is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 4 m/s2 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball rolls down a ramp | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:56 PM | |

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| 128. The velocity acquired after starting from rest is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 8 m/s | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *PREFACE NAME:* | ball rolls down a ramp | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/29/2016 4:57 PM | |

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| 129. A racecar goes around a 200 m radius curve at a constant speed of 40 m/s. Its acceleration is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 8 m/s2 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 130. A racecar driver steps on the gas, changing his speed from 10 m/s to 30 m/s in 4 seconds. The acceleration of the racecar is \_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 5 m/s2 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 131. A racecar driver steps on the gas, and his racecar travels 20 meters in 2 seconds starting from rest. The acceleration of the racecar is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 10 m/s2 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 132. A glider is in a banked curve with a radius of 125 m radius curve at a constant speed of 10 m/s. Its acceleration is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 0.8 m/s2 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/14/2016 12:28 PM | |

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| 133. A pilot punches the throttle lever forward, changing his speed from 0 m/s to 40 m/s in 7 seconds. The acceleration of the racecar is \_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 5.7 m/s2 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/14/2016 12:28 PM | |

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| 134. An aircraft undergoes a constant acceleration of 11 m/s2 for 12 seconds. The distance traveled is \_\_\_\_\_\_\_\_\_\_.   |  |  | | --- | --- | | *ANSWER:* | 792 m | | *POINTS:* | 1 | | *QUESTION TYPE:* | Completion | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/15/2016 12:45 PM | |

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| 135. The Gateway Arch in St. Louis, Missouri is 630 feet tall. Express this distance in meters and in kilometers.   |  |  | | --- | --- | | *ANSWER:* | 192 m, 0.192 km | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 136. Devil’s Tower National Monument is 1280 ft high. Convert this height to meters.   |  |  | | --- | --- | | *ANSWER:* | 390 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 137. A runner in a race takes 2.7 seconds to go from the 40 meter mark to the 70-meter mark.  ​  (a) What is the runner’s speed?  (b) How far would the runner go in 8 seconds if this speed is maintained?  (c) How long did it take the runner to cover the first 40 m (assuming the same speed was maintained)?   |  |  | | --- | --- | | *ANSWER:* | 11.1 m/s, 89 m, 3.6 s | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 7/12/2016 12:11 PM | |

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| 138. During takeoff a jet aircraft goes from 0 m/s to 60 m/s in 5 seconds.  ​  (a) What is the jet’s acceleration?  (b) What is the jet’s speed after 22 seconds?   |  |  | | --- | --- | | *ANSWER:* | 12 m/s2, 264 m/s | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/14/2016 12:32 PM | |

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| 139. The acceleration of a ball as it rolls down a ramp is 3 m/s2. It starts from rest.  (a) What is the ball’s speed after 4 seconds? (b) How far does the ball travel during the 4 seconds?   |  |  | | --- | --- | | *ANSWER:* | 12 m/s, 24 m | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 140. A race car goes around a curve at 50 m/s. The radius of the curve is 400 m. What is the car’s acceleration?   |  |  | | --- | --- | | *ANSWER:* | 6.25 m/s2 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| 141. A ‘cliff diver’ in Mexico dives off a high cliff and falls for 2.3 seconds before hitting the water.  ​  (a) How fast is the diver going at impact?  (b) How far below the cliff is the diver at this point?   |  |  | | --- | --- | | *ANSWER:* | 22.5 m/s, 25.9 m | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/14/2016 12:34 PM | |

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| 142. A high performance aircraft is executing a tight turn at 135 m/s. The radius of the curve is 750 m. What is the aircraft’s acceleration?   |  |  | | --- | --- | | *ANSWER:* | 24.3 m/s2 | | *POINTS:* | 1 | | *QUESTION TYPE:* | Subjective Short Answer | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/13/2016 10:28 AM | |

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| *Match each item with the correct statement below.*   |  |  |  |  | | --- | --- | --- | --- | | a. | acceleration | b. | Aristotle | | c. | centripetal acceleration | d. | English | | e. | frequency | f. | Galileo Galilei | | g. | kilo | h. | metric | | i. | milli- | j. | period | | k. | scalar | l. | velocity | | m. | vector | n. | constant acceleration |  |  |  | | --- | --- | | *QUESTION TYPE:* | Matching | | *HAS VARIABLES:* | False | | *DATE CREATED:* | 6/13/2016 10:28 AM | | *DATE MODIFIED:* | 6/15/2016 1:47 PM | |

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| 143. the number of cycles of a periodic process that occur per unit time   |  |  | | --- | --- | | *ANSWER:* | e | | *POINTS:* | 1 | |

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| 144. the slope of a distance versus time graph equals this   |  |  | | --- | --- | | *ANSWER:* | l | | *POINTS:* | 1 | |

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| 145. any physical quantity that has a direction associated with it   |  |  | | --- | --- | | *ANSWER:* | m | | *POINTS:* | 1 | |

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| 146. any physical quantity that does not have a direction associated with it   |  |  | | --- | --- | | *ANSWER:* | k | | *POINTS:* | 1 | |

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| 147. the rate of change of velocity   |  |  | | --- | --- | | *ANSWER:* | a | | *POINTS:* | 1 | |

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| 148. time it takes for one complete cycle of a periodic process   |  |  | | --- | --- | | *ANSWER:* | j | | *POINTS:* | 1 | |

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| 149. any object moving in a circle undergoes this   |  |  | | --- | --- | | *ANSWER:* | c | | *POINTS:* | 1 | |

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| 150. metric prefix that means one thousand   |  |  | | --- | --- | | *ANSWER:* | g | | *POINTS:* | 1 | |

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| 151. correctly analyzed the motion of a falling body   |  |  | | --- | --- | | *ANSWER:* | f | | *POINTS:* | 1 | |

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| 152. most widely used system of measure   |  |  | | --- | --- | | *ANSWER:* | h | | *POINTS:* | 1 | |

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| 153. An object undergoing free fall in a vacuum experiences   |  |  | | --- | --- | | *ANSWER:* | n | | *POINTS:* | 1 | |