McRoberts Secondary

Chapter 3 Quiz 2025-09-17

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In this section **no** changes or modifications must be made!

Scrambling

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Type: 015

Exam ID(Physics 11): 25091700001

Please mark the boxes carefully: ☒ Not marked: ☐ or ■

This document is scanned automatically. Please keep clean and do not bend or fold. For filling in the document please use a **blue or black pen**.

Only clearly marked and positionally accurate crosses will be processed!

Answers 1 - 15

	a	b	c	d
1	☐	☐	☐	☐
2	☐	☐	☐	☐
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13	☐	☐	☐	☐
14	☐	☐	☐	☐
15	☐	☐	☐	☐
	a	b	c	d

1. Which of the following are scalars? *Select all that apply.*
   a. velocity
   b. distance
   c. acceleration
   d. time
2. A vector quantity is fully described by
   a. magnitude alone
   b. direction alone
   c. both magnitude and direction
   d. none of these
3. A car travels at 50 km/h for 30 minutes and 80 km/h for 1 hour and 15 minutes. How far does it travel in this time?
   a. 125 km
   b. 130 km
   c. 117 km
   d. 113.75 km
4. Suppose an object travels at a constant velocity of 30.0 km/h. What distance would it travel in 89.0 minutes?
   a. 39.3 km
   b. 1640 km
   c. 2270 km
   d. 44.5 km
5. Suppose an object travels at a constant velocity of 13.4 m/s. What distance would it travel in 48 s?
   a. 643 m
   b. 531 m
   c. 0.28 m
   d. 465 m
6. How many seconds would it take the Sun's light to reach Earth? The speed of light in vacuum is 3.00×10^8 m/s. The Sun is 1.5×10^{11} m from the Earth.
   a. 0 s
   b. 2.0×10^{-3} s
   c. 5.0×10^2 s
   d. 4.5×10^{19} s
7. A light-year (ly) is the distance that light travels in vacuum in one year.
   The speed of light is 3.00×10^8 m/s. How many miles are there in a light-year?
   (1 mile = 1.609×10^3 m, 1 year = 365 days)
   a. 5.88×10^{12} mi
   b. 9.46×10^{12} mi
   c. 5.88×10^{15} mi
   d. 9.46×10^{15} mi

8. A runner completes a marathon (42.195 km) with an average pace of 3 minutes and 54 seconds per kilometre. What is the runner's time for the marathon? (Answers are formatted as hours : minutes : seconds)

    a. 01 : 54 : 37

    b. 02 : 44 : 34

    c. 01 : 36 : 24

    d. 02 : 29 : 42

9. Suppose an object travels at a constant velocity of 8.2 m/s. How much time would it take for the object to travel a distance of 20 m?

    a. 0.41 s

    b. 2.44 s

    c. 164 s

    d. 108 s

10. A car travels 36 km at 11 km/h and 288 km at 112 km/h. What is the average speed for this trip?

    a. 80 km/h

    b. 13 km/h

    c. 55 km/h

    d. 106 km/h

11. A truck travels at 46 km/h for 3 hours and at 106 km/h for 8 hours. What is the average speed for the trip?

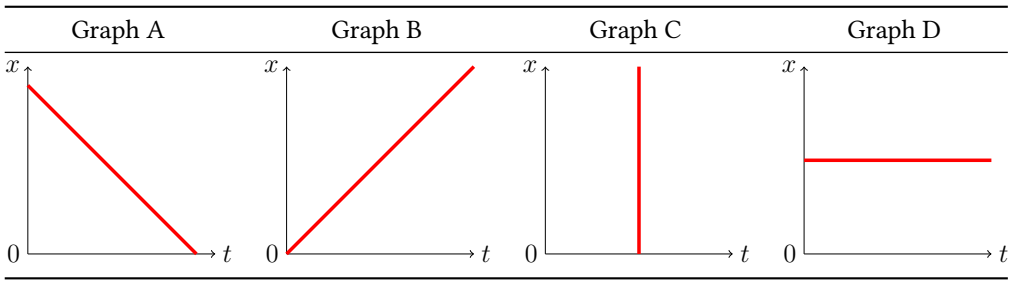
    a. 89.6 km/h

    b. 69.2 km/h

    c. 79.5 km/h

    d. 76 km/h

12. Which position-time graph represents an object at rest?



    a. Graph A

    b. Graph B

    c. Graph C

    d. Graph D

13. What is the magnitude of the slope of a position-time graph?

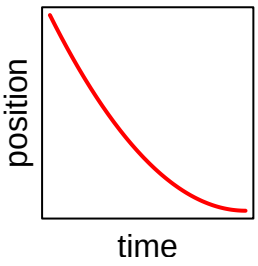
    a. displacement

    b. distance

    c. acceleration

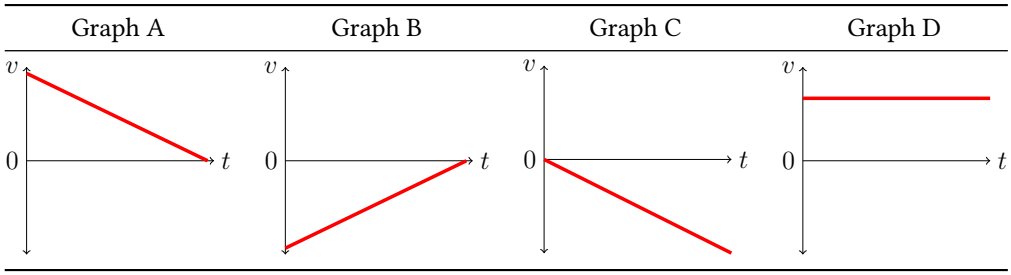
    d. speed

14. Which choice best matches the given position-time graph?



a. moving to the right and speeding up.
b. moving to the right and slowing down.
c. moving to the left and speeding up.
d. moving to the left and slowing down.

15. Which velocity-time graph represents motion with constant positive acceleration?



a. Graph A
b. Graph B
c. Graph C
d. Graph D