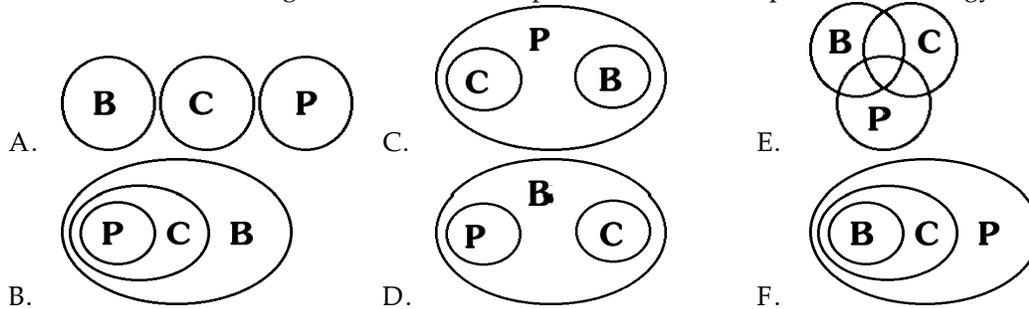


PracTest PHY.01 - Introduction to Motion

1. As time progresses, the amount of data (facts and observations) we have about the universe ? and the number of fundamental principles required to explain the data ?.
- A. increases; also increases C. decreases; increases
 B. increases; decreases D. decreases; also decreases

2. Which of the Venn diagrams below best depicts the relationship between Biology, Chemistry, and Physics



3. The abbreviation for the SI prefix used to denote 10^{-6} is

- A. m C. n E. μ
 B. p D. f F. a

4. The quantity 13GW can be written

- A. $13 \times 10^6 W$ B. $13 \times 10^9 W$ C. $13 \times 10^{12} W$ D. $13 \times 10^{15} W$

5. The value 648×10^{27} is expressed correctly in

- A. scientific notation only
 B. engineering notation only
 C. both scientific and engineering notation
 D. neither scientific nor engineering notation

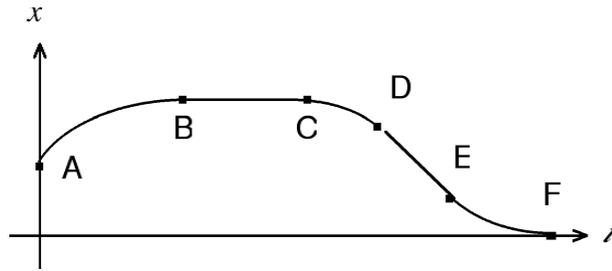
6. A particular inkjet printer is advertised as being capable of spraying ink in droplets having a volume of 4 picoliters. How much of a liter does that represent?

- A. 0.4 D. 0.000 000 004
 B. 0.004 E. 0.000 000 000 004
 C. 0.000 004 F. 0.000 000 000 000 004

7. The height of our classroom (in meters) has an order of magnitude 10^n where n is

- A. -4 B. -2 C. 0 D. 2 E. 4

The following question(s) refer to the position vs. time graph shown below.



8. From A to B, the particle is

A. undergoing an increase in speed	C. maintaining constant speed
B. undergoing a decrease in speed	D. at rest

9. From C to D, the particle is

A. undergoing an increase in speed	C. maintaining constant speed
B. undergoing a decrease in speed	D. at rest

10. From D to E, the particle is

A. undergoing an increase in speed	C. maintaining constant speed
B. undergoing a decrease in speed	D. at rest

11. Which of the following involve a change in velocity?

A. A change in speed	C. Both of these
B. A change in direction of motion	D. None of these

12. A ball is thrown straight up. At the highest point in its flight, the speed of the ball is most nearly

A. 0 m/s	B. 1 m/s	C. 10 m/s	D. 100 m/s	E. 1000 m/s
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13. A ball is thrown straight up. At the highest point in its flight, the magnitude of acceleration of the ball is most nearly

A. 0 m/s ²	C. 10 m/s ²	E. 1000 m/s ²
B. 1 m/s ²	D. 100 m/s ²	

Walking with constant velocity, Susan passes point A (marked "12 meters") at 4:37:24 (time expressed in hours:minutes:seconds). She then passes point B (marked "36 meters") at 4:37:36. At point C, she meets Alex. The two proceed to plot brownie point strategy.

14. What was Susan's speed between point A and point B?

A. 0.5 m/s	B. 1 m/s	C. 2 m/s	D. 3 m/s	E. 4 m/s
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15. How far does an object travel if its speed is 8 m/s and it travels for 2 s?

A. 0.25 m	C. 2 m	E. 16 m
B. 0.5 m	D. 4 m	F. 32 m

16. A pitcher takes 0.1 s to accelerate a baseball from rest to 30 m/s. The ball's acceleration is
 A. 3 m/s^2 B. 30 m/s^2 C. 300 m/s^2 D. 3000 m/s^2
17. [CPA-Linear Motion] Velocity indicates speed and
 A. acceleration B. direction C. motion D. position
18. [CPA-Linear Motion] A ball is thrown straight up with an initial speed of 10 m/s. How long does it take to get back down?
 A. 1 s B. 2 s C. 3 s D. 6 s E. 10 s
19. [Secrets of the Psychics] Psychologist and former palm-reader Ray Hyman found that he had the greatest success with clients when he
 A. gave a straight-up reading in accordance with palm-reading guidelines
 B. told clients the opposite of what he saw in their palms
 C. imagined that he lived in an earlier era
 D. assumed his clients were skeptical of palm-reading and his abilities
20. [Secrets of the Psychics] Many attempts were made to test the charged water at the Russian non-traditional medical institute. What was the conclusion?
 A. it couldn't be tested
 B. charged water discharged everything else in the room
 C. the charge could be detected by a skilled practitioner
 D. the charge on the water could only be detected by machines, not humans
21. **Where does the preponderance of evidence point?** This is Baloney Detection Kit item
 A. #2 B. #4 C. #6 D. #8 E. #10
22. [Baloney Detection Kit] Multiple Universes is
 A. Probably True B. Uncertain C. Probably Not True
23. The motion of a car is monitored by a motion sensor. If the car is moving away from the sensor and slowing down, identify the corresponding position vs. time graph.



- A.
- B.
- C.
- D.

PracTest PHY.01 - Introduction to Motion

Answer Section

MULTIPLE CHOICE

- | | | |
|------------|------------------------------|-----------------------|
| 1. ANS: B | TOP: Scheme | NOT: UT1-03 PracTest |
| 2. ANS: F | TOP: Scheme | NOT: UT1-03 PracTest |
| 3. ANS: E | TOP: Sci Not | NOT: UT1-03 PracTest |
| 4. ANS: B | TOP: Sci Not Pre | NOT: UT1-03 PracTest |
| 5. ANS: B | TOP: Sci Not Eng | NOT: UT1-03 PracTest |
| 6. ANS: E | TOP: Sci Not Pre | NOT: UT1-03 PracTest |
| 7. ANS: C | TOP: Order Mag | NOT: UT2b-03 PracTest |
| 8. ANS: B | TOP: Graph Segments | |
| 9. ANS: A | TOP: Graph Segments | |
| 10. ANS: C | TOP: Graph Segments | |
| 11. ANS: C | TOP: Definitions | NOT: PracTest |
| 12. ANS: A | TOP: Questions | NOT: UT3-03 PracTest |
| 13. ANS: C | TOP: Questions | NOT: UT3-03 PracTest |
| 14. ANS: C | TOP: Susan and Alex | NOT: PracTest |
| 15. ANS: E | TOP: Calculations | |
| 16. ANS: C | TOP: Calculations | NOT: TCJ |
| 17. ANS: B | TOP: 4. Linear Motion | |
| 18. ANS: B | TOP: 4. Linear Motion | |
| 19. ANS: B | TOP: Secrets of the Psychics | |
| 20. ANS: A | TOP: Secrets of the Psychics | |
| 21. ANS: C | TOP: Baloney Detection Kit | |
| 22. ANS: B | TOP: Baloney Detection Kit | |
| 23. ANS: A | TOP: Motion Sensor | NOT: AP1.01 - UT2-06 |