

Motion and Forces in Motion

Study Guide Answers

1. distance and time
2. m/s
3. velocity has direction, but speed does not
4. a. 5 m/s b. 5 m/s east
5. velocity and time
6. the speed decreased
7. balanced force
8. unbalanced force
9. 15 N north
10. friction
11. rolling friction
12. static friction
13. use sandpaper
14. helping car tires move forward

15. It can wear car engine parts out
16. Because friction stops it
17. the amount of matter in an object
18. Weight is a measure of gravitational force and mass is not.
19. mass and distance
20. have greater masses
21. decreases
22. they will land at the same time
23. It causes the speed of an object to decrease.
24. the flat paper has more air resistance
25. Objects at rest stay at rest and objects in motion stay in motion unless acted on by an unbalanced force.
26. Acceleration depends on mass and force.
27. $F = m \times a$

- 28. the watermelon has more mass
- 29. For every action there is an equal and opposite reaction.
- 30. The larger the mass, the greater the inertia.
- 31. By increasing its mass or velocity
- 32. outside forces are acting on it.
- 33. the variable that changes
- 34. It's what you measure in an experiment
- 35. the group that does not receive the independent variable
- 36. factors held constant
- 37.
 - a. coconut juice
 - b. the amount of green slime
 - c. the side of the shower with water
 - d. same slime