Name: _____ Date: _____

PHYSICS
Distance & Displacement Review

Part 1: Comparing numbers for position. Read the statements. Choose which option best describes the motion of the people involved. Draw the paths of motion to help you.

_____ 1. Gilbert walked 50 meters E.
A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

_____ 2. Robbie walked 60 meters W. He stopped, then walked another 40 meters W.
A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

_____ 3. Felicia walked 80 meters N. She turned, then walked 40 meters S.
A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

_____ 4. Carlos walked 50 meters N. He turned, then walked 100 meters S.
A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

_____ 5. Tyrone walked 60 meters E. He turned, then walked 60 meters W.
A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

_____ 6. Marlow walked 80 m E. He turned and walked 80 m N.
A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

_____ 7. Kimmy walked 100 m S. She turned and walked 50 m W.
A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

Jimmy ran 120 m N.
_____ 8. Kevin ran 120 m S.
A. Jimmy and Kevin moved equal distances and equal displacements.
B. Jimmy and Kevin moved equal distances, but unequal displacements.
C. Jimmy and Kevin moved unequal distances, but equal displacements.
D. Jimmy and Kevin moved unequal distances and unequal displacements.

Beverly walked 80 m S.
_____ 9. Julia walked 60 m S.
A. Beverly and Julia moved equal distances and equal displacements.
B. Beverly and Julia moved equal distances, but unequal displacements.
C. Beverly and Julia moved unequal distances, but equal displacements.
D. Beverly and Julia moved unequal distances and unequal displacements.

Vernon walked 90 m S. Stopped, then walked 50 m S.
_____ 10. Treyvon walked 60 m S. Stopped, then walked 80 m S.
A. Vernon and Treyvon moved equal distances and equal displacements.
B. Vernon and Treyvon moved equal distances, but unequal displacements.
C. Vernon and Treyvon moved unequal distances, but equal displacements.
D. Vernon and Treyvon moved unequal distances and unequal displacements.

Brandy walked 120 m N.
_____ 11. Carol walked 40 m N. Stopped, then walked 80 m N.
A. Brandy and Carol moved equal distances and equal displacements.
B. Brandy and Carol moved equal distances, but unequal displacements.
C. Brandy and Carol moved unequal distances, but equal displacements.
D. Brandy and Carol moved unequal distances and unequal displacements.

Lateefa walked 50 m N.

_____ 12. Monica walked 25 m N, stopped, then walked 25 m S.

A. Lateefa and Monica moved equal distances and equal displacements.
B. Lateefa and Monica moved equal distances, but unequal displacements.
C. Lateefa and Monica moved unequal distances, but equal displacements.
D. Lateefa and Monica moved unequal distances and unequal displacements.

Greg walked 100 m W, turned, then walked 80 m E.

_____ 13. Perry walked 80 m E, turned, then walked 100 m W.

A. Greg and Perry moved equal distances and equal displacements.
B. Greg and Perry moved equal distances, but unequal displacements.
C. Greg and Perry moved unequal distances, but equal displacements.
D. Greg and Perry moved unequal distances and unequal displacements.

Julian walked 100 m W, turned, and walked 50 m E.

_____ 14. Patrice walked 75 m W, turned, and walked 25 m E.

A. Julian and Patrice moved equal distances and equal displacements.
B. Julian and Patrice moved equal distances, but unequal displacements.
C. Julian and Patrice moved unequal distances, but equal displacements.
D. Julian and Patrice moved unequal distances and unequal displacements.

_____ 15. Under which circumstance would a person or object move a very large distance but move 0 displacement?

A. Movement is in one direction in a straight line.
B. Movement is repeatedly back and forth, but in a straight line.
C. There is no movement. The object or person is always motionless.
D. Movement is in a circle, and the moving person or object is passing through the starting position.

_____ 16. Under which circumstance would a person or object move with equal magnitudes of distance and displacement?

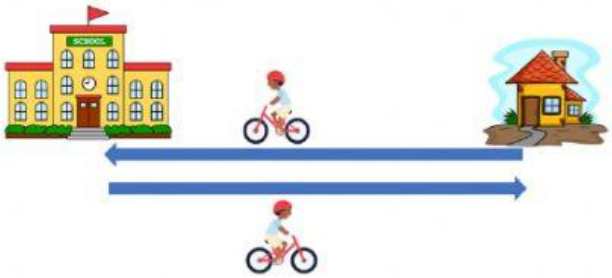
A. Movement is in one direction in a straight line.
B. Movement is repeatedly back and forth, but in a straight line.
C. There is no movement. The object or person is always motionless.
D. Movement is in a circle, and the moving person or object is passing through the starting position.

Part 2: Interpreting Diagrams of Motion. Read the narrative for each picture. Choose which option best describes the motion of the people involved.

Jeremy rode his bicycle from his house west to school.

_____ 17. Which best describes his trip to school?

A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.



Jeremy rode his bicycle from his house west to school, then from school back east to his house.

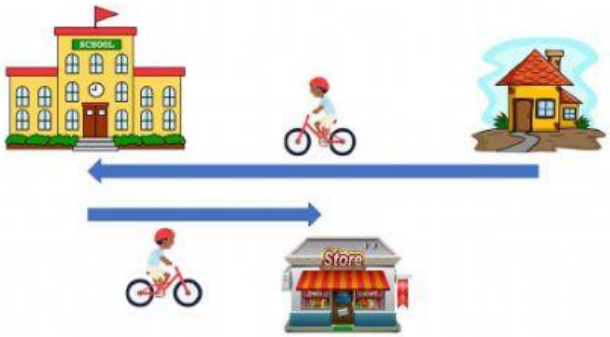
_____ 18. Which best describes his trip from house to school to house?

A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

Jeremy rode his bicycle from his house east to the street corner, stopped for 1 minute, then rode east to the park.

_____ 19. Which best describes his trip from house to the park.

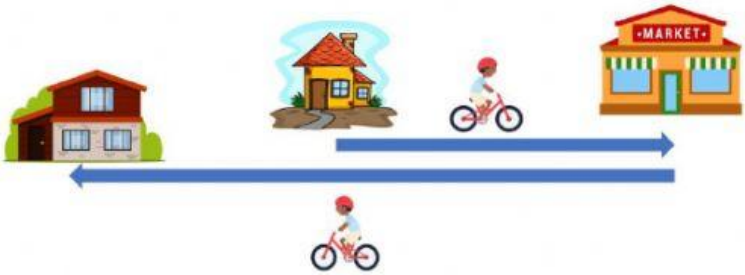
A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.



Jeremy rode his bicycle from his house west to school, then from school east to the store.

_____ 20. Which best describes his trip from house to the store?

A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

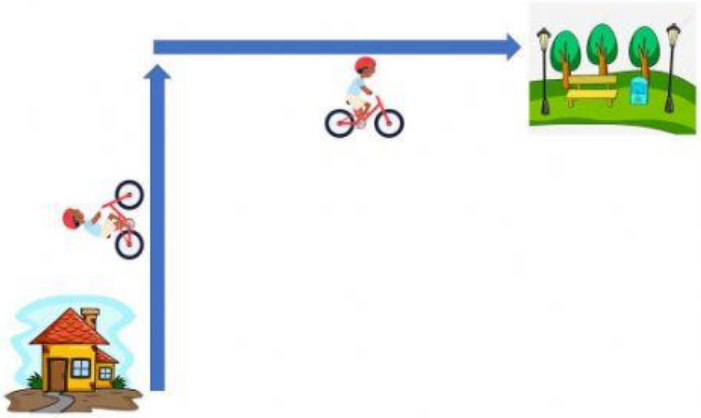


Jeremy rode his bicycle from his house east to the market, then from the market west to his friend's house.

_____ 21 Which best describes his trip from house to market, then to his friend's house?

A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

Jeremy rode his bicycle from his house north to the street corner, then turned east and rode to the park.

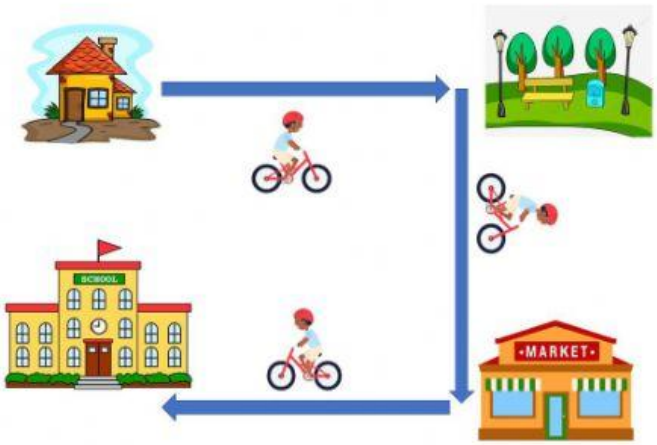


Which best describes his trip from his house to the corner and to the park?

_____ 22

A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

Jeremy rode his bicycle from his house east to the park. He turned, then rode south to the market. He turned, then rode west to the school.

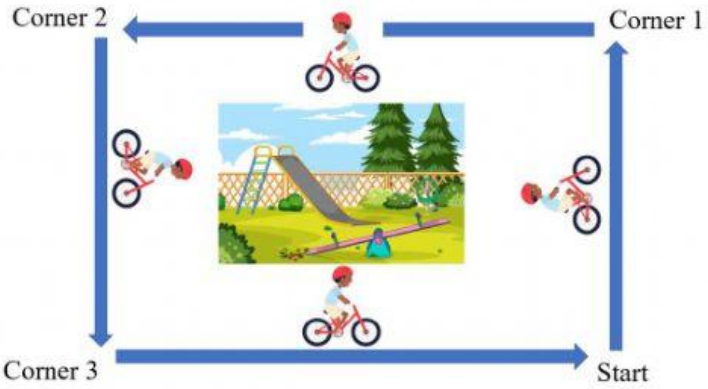


Which best describes his trip from his house to the park, to the market, and finally to the school?

_____ 23

A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.

Jeremy rode his bicycle around the perimeter of the park. The park is rectangular in shape. He started at the SE corner (Start). He rode his bike in sequence to Corner 1, Corner 2, Corner 3, and back to Start.



_____ 24. Which best describes his trip around the perimeter of the playground from Start to Start.

A. Magnitude of distance > Magnitude of displacement.
B. Magnitude of distance = Magnitude of displacement.
C. Magnitude of displacement > Magnitude of distance.
D. Distance is large. Magnitude of displacement is 0 m.