

Astronomy Ranking Task: Momentum

Exercise #2

Description: The following colored marbles all have the same physical size.

- A. red
- B. yellow
- C. blue
- D. green

A. Ranking instructions: Assume the marbles all have the same amounts of momentum but are rolling with different speeds: red is fastest, yellow is second fastest, blue is third fastest, and green is slowest. Rank their masses.

Ranking Order: Least 1 _____ 2 _____ 3 _____ 4 _____ Greatest

Or, all of the objects have the same mass. _____ (indicate with a check mark)

Or, there is not enough information to determine this. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

B. Ranking instructions: Assume the marbles are rolling with the same speeds but each has a different amount of momentum: blue has the most, yellow has the second most, green has the third most, and red has the least. Rank their masses.

Ranking Order: Least 1 _____ 2 _____ 3 _____ 4 _____ Greatest

Or, all of the objects have the same mass. _____ (indicate with a check mark)

Or, there is not enough information to determine this. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:
