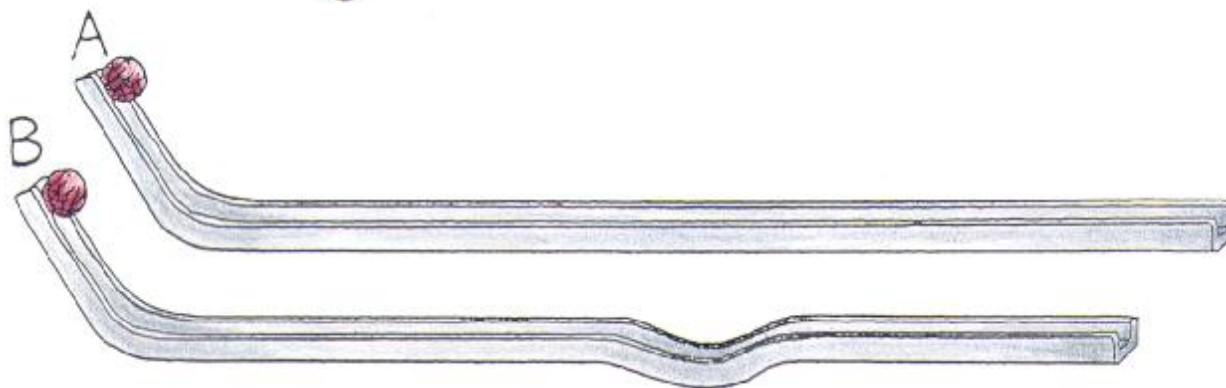


NEXT-TIME QUESTION

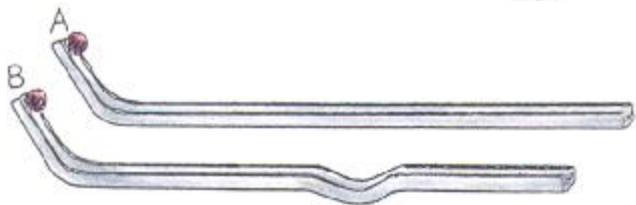


Tracks A and B are made from pieces of channel iron of the same length. They are bent identically except for the same dip in Track B as shown. When the balls are simultaneously released on both tracks as indicated, the ball that races to the end of the track first is on

- a) Track A.
- b) Track B.
- c)...Both reach the end at the same time.



NEXT-TIME QUESTION



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- a) Track A.
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- c) ...Both reach the end at the same time.

Answer: b

The ball to win the race is the ball having the greatest *average speed*. Along each track both balls have identical speeds except at the dip in Track B. Instantaneous speeds everywhere in the dip are greater than along the flat part of the track. Greater speed in the dip means greater overall average speed and shorter time for a ball on Track B.

If your answer was c; you may have been influenced by realizing both balls finish at the *same speed*. Quite true, but not in the *same time*. Although speed gained when going down the dip is the same as the speed lost coming out of the dip, average speed while in the dip is greater than along the flat part of the track.

If this seems tricky, it's the classic confusion between speed and time.



Hewitt
Draw it!