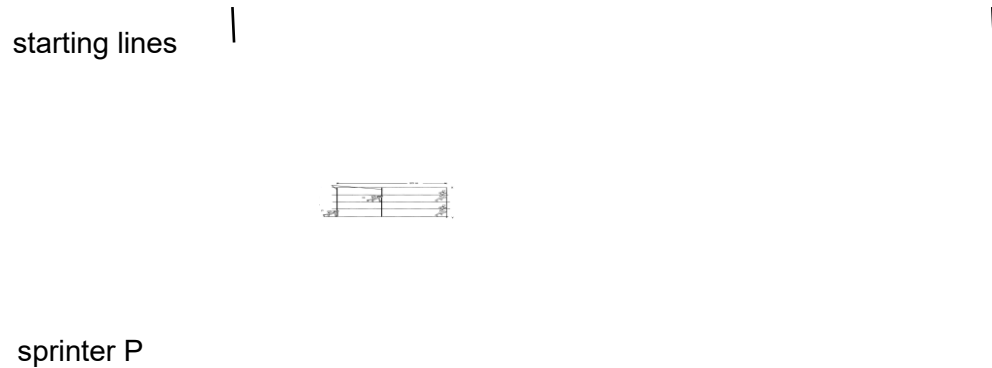**3**

In a 'handicap' sprint race, sprinters P and Q both start the race at the same time but different starting lines on the track as shown in the figure below. Sprinter P starts at 20 m from the line XY. The handicap is such that both sprinters reach the line XY at the same time.

starting lines | |

sprinter P

Sprinter P has a constant acceleration of 1.6 m s^{-2} from the start line to the line XY. Sprinter Q has a constant acceleration of 1.2 m s^{-2} from the start line to XY.

What is the distance between the starting lines for sprinters P and Q?

A

2.5 m

B

5.0 m

C

10 m

D

15 m