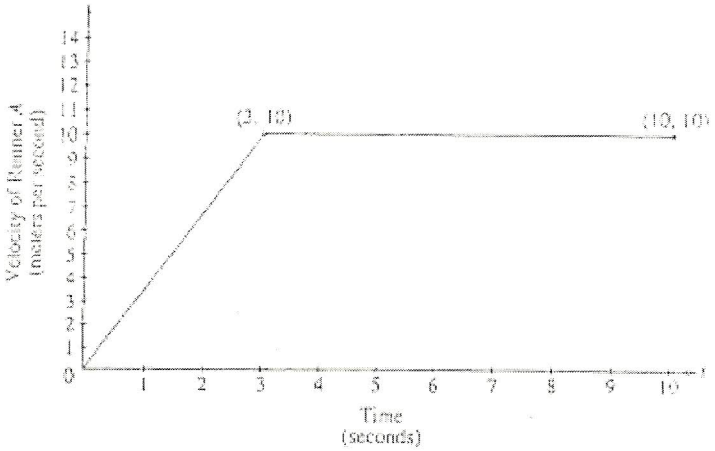
15 MINUTES
CALCULATOR ACTIVE

Two runners, A and B, run on a straight racetrack for $0 \le t \le 10$ seconds. The graph below, which consists of two line segments, shows the velocity, in meters per second, of Runner A. The velocity, in meters per second, of Runner B is given by the equation $v(t) = \dfrac{24t}{2t+3}$.



a) Find the velocity of Runner A and the velocity of Runner B at time t = 2 seconds. Indicate units of measure.
b) Find the acceleration of Runner A and the acceleration of Runner B at t = 2 seconds. Indicate units of measure.
c) At what time do the two runners accelerate at the same rate?

a)

b)

c)