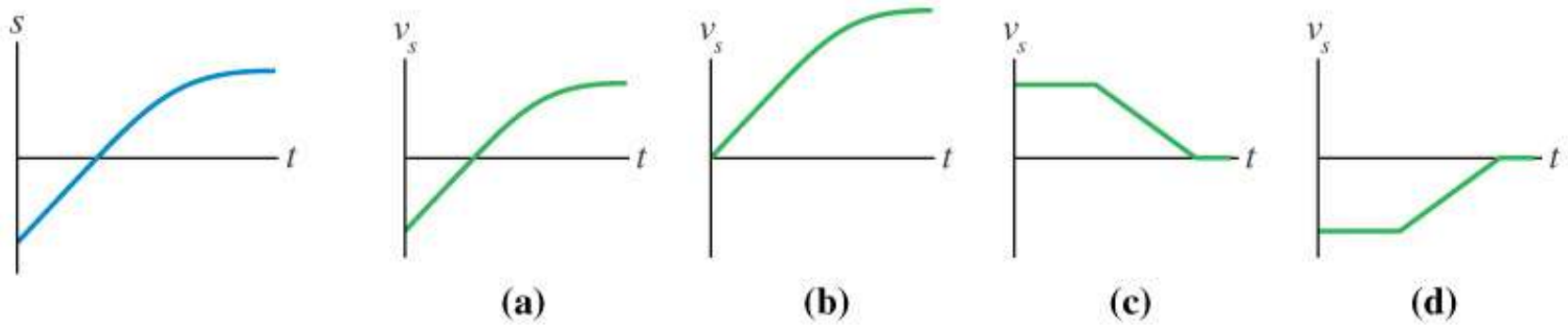
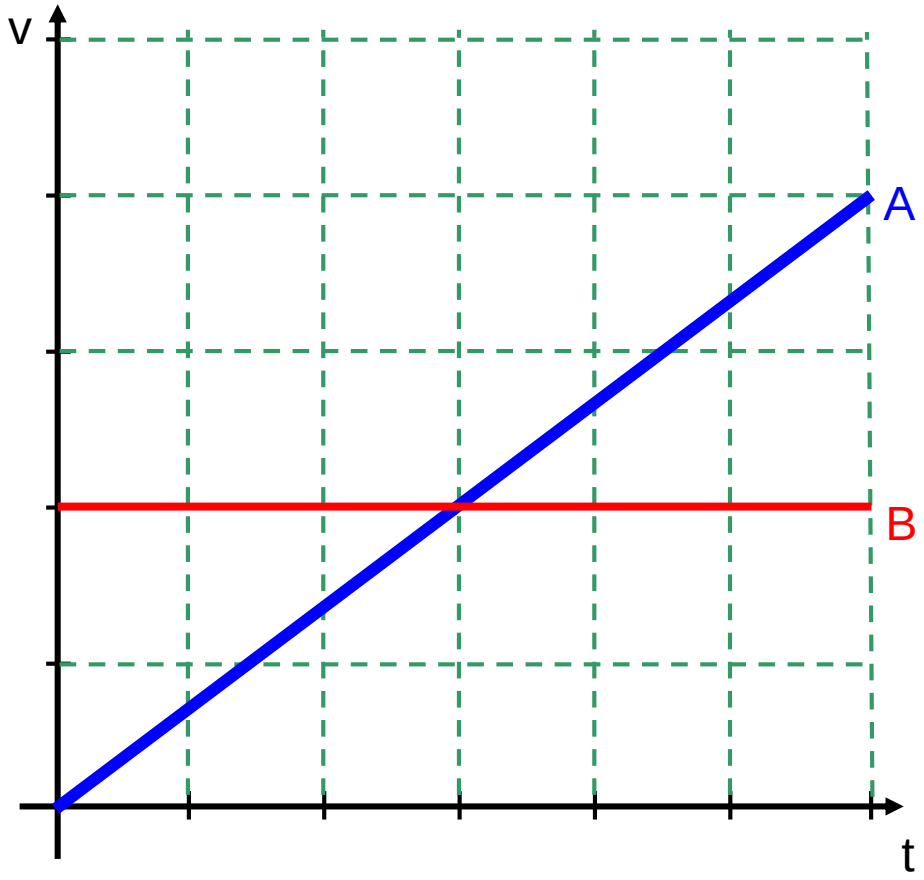
Which velocity-versus-time graph goes with this position-versus-time graph on the left?



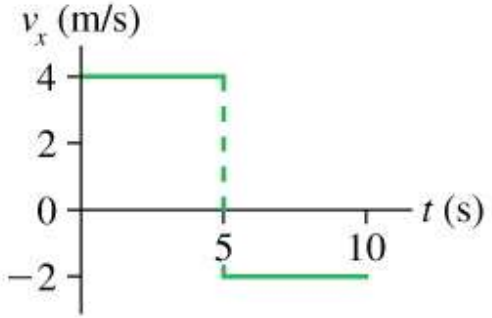


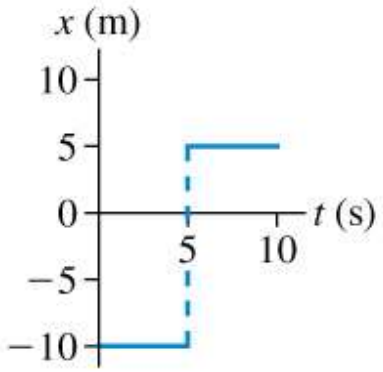
Two objects start from the same point at t = 0.

a. Do they ever have the same velocity? If so, when?

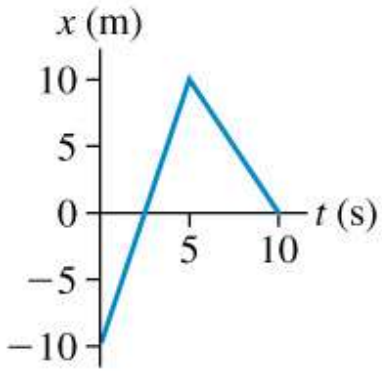
b. Are they ever side-by-side again? If so, when?

Which position-versus-time graph goes with this velocity-versus-time graph on the left? The particle's position at $t_i = 0$ s is $x_i = -10$ m .

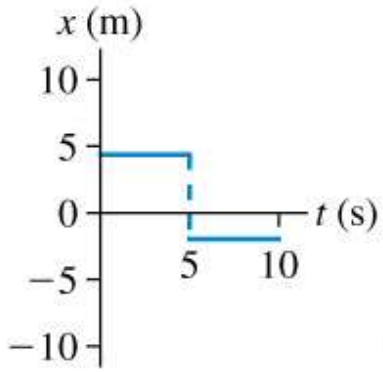




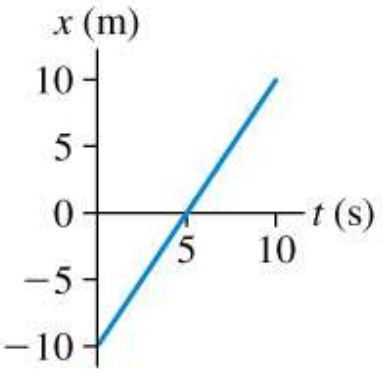
(a)



(b)

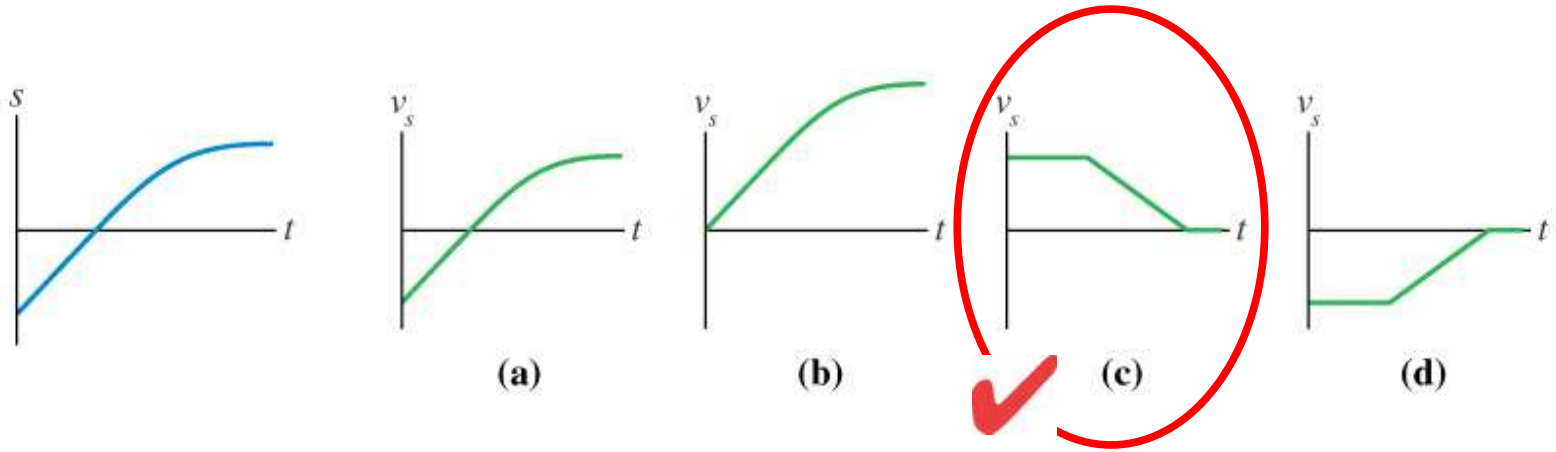


(c)

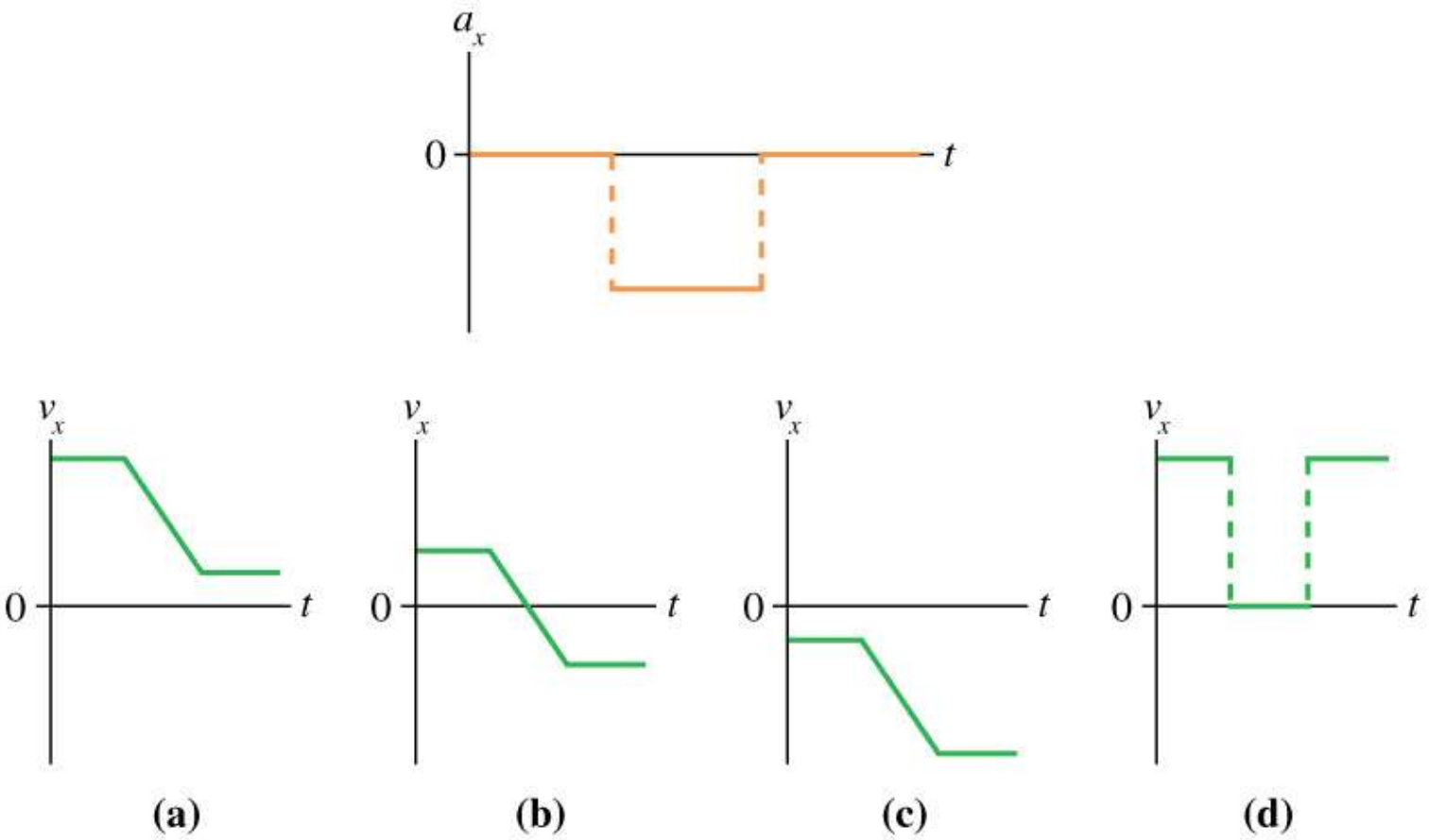


(d)

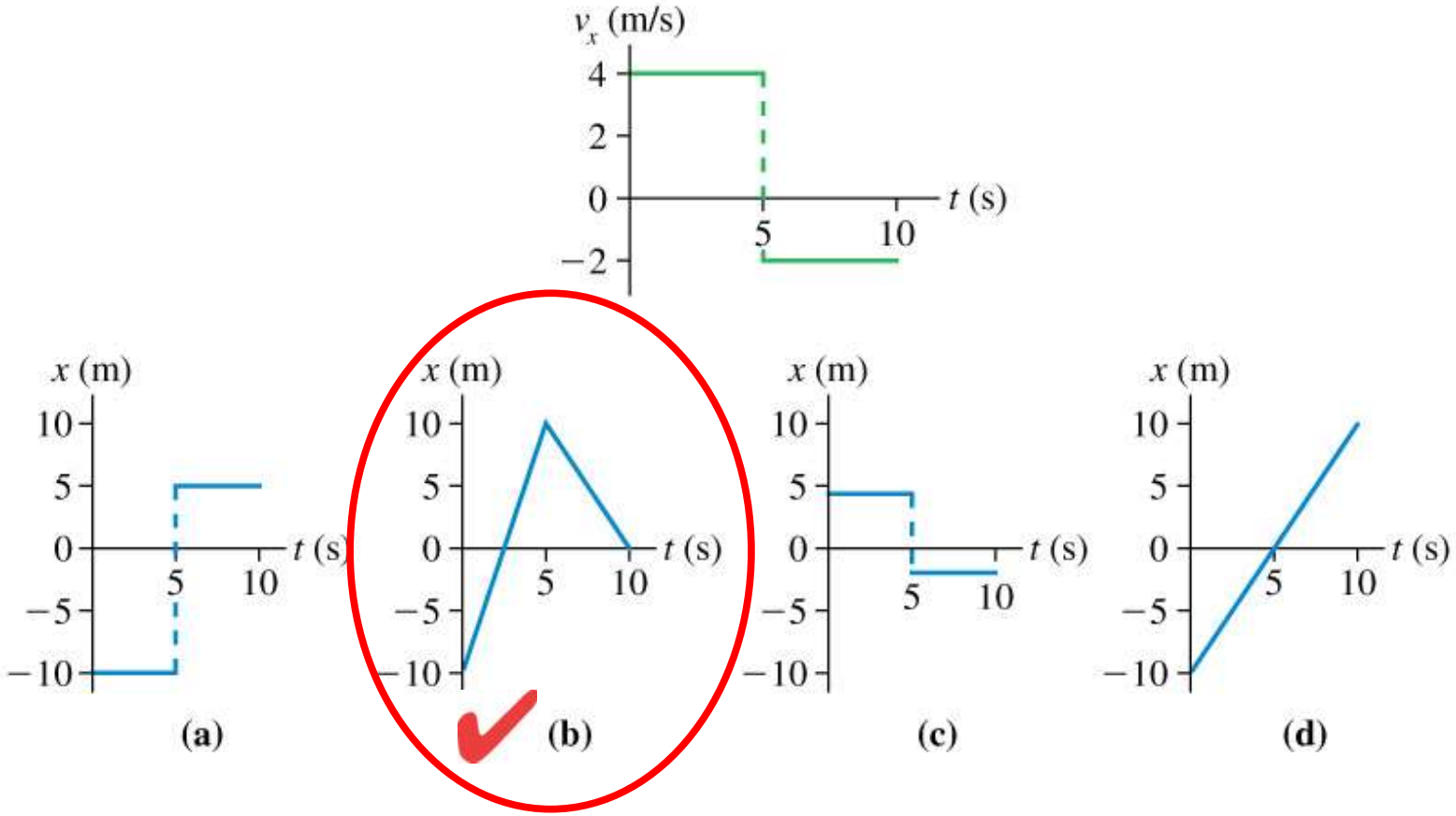
Which velocity-versus-time graph goes with this position-versus-time graph on the left?



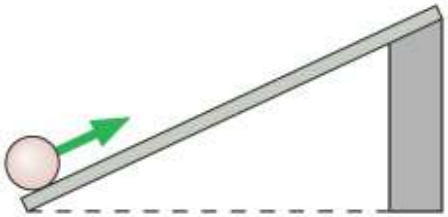
Which velocity-versus-time graph or graphs goes with this acceleration-versus-time graph? The particle is initially moving to the right and eventually to the left.

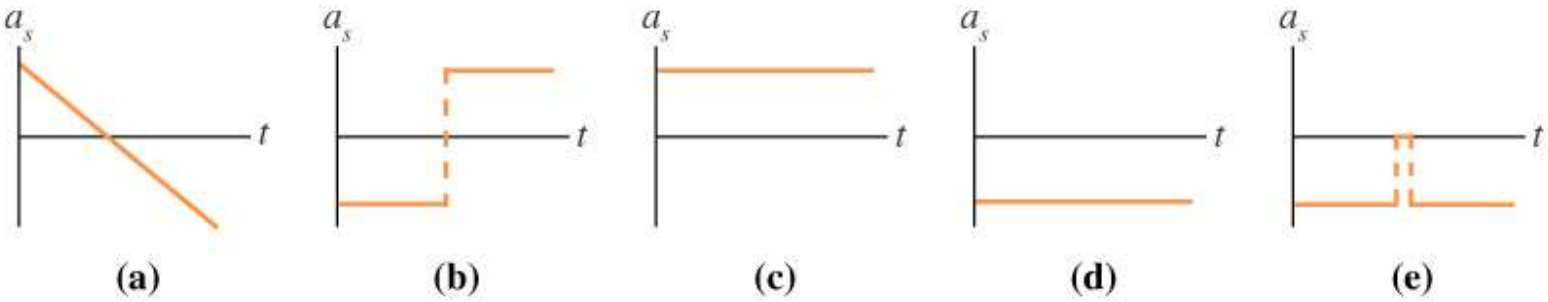


Which position-versus-time graph goes with this velocity-versus-time graph on the left? The particle's position at $t_i = 0$ s is $x_i = -10$ m .



The ball rolls up the ramp, then back down. Which is the correct acceleration graph?





The ball rolls up the ramp, then back down. Which is the correct acceleration graph?