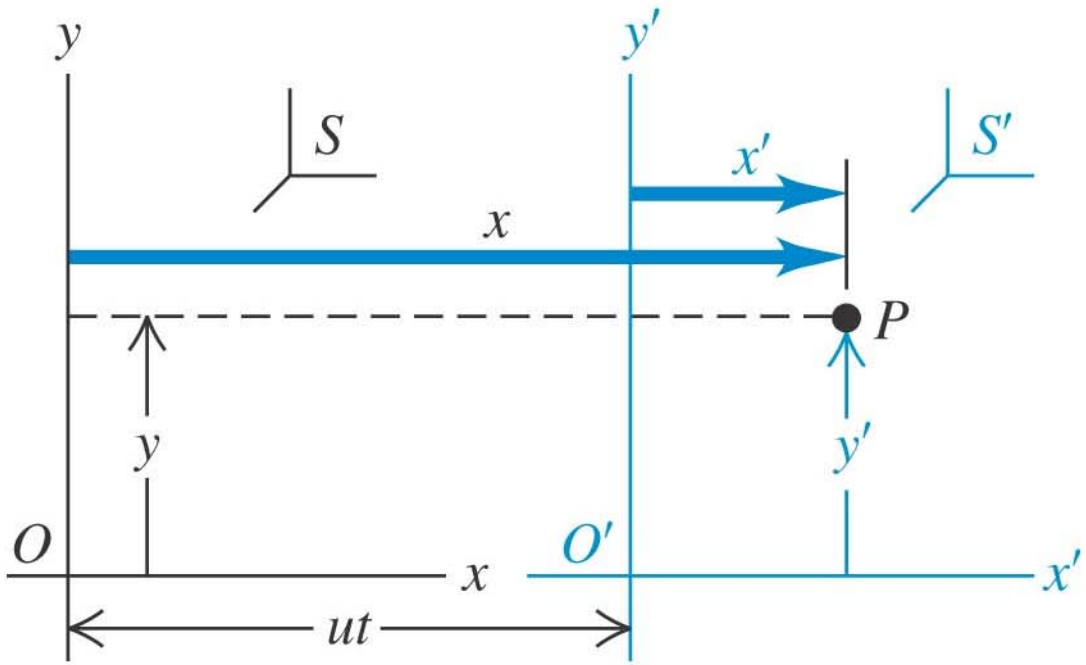
Frame S' moves relative to frame S with constant velocity u along the common x-x'-axis.

Origins O and O' coincide at time $t = 0 = t'$.



Samir is standing on the ground while Maria flies past him in her spaceship at a speed of 0.6 c. Both Maria and Samir have clocks that they measure as ticking once every second. As measured by Maria, what is the time between ticks on Samir's clock?

A. More than 1.0 s

B. 1.0 s

C. Less than 1.0 s but more than 0.0 s

D. 0.0 s

E. Not enough information is given.

A spaceship moving away from the earth with speed 0.6 c fires a robot space probe in the same direction as its motion, with speed 0.3 c relative to the spaceship. What is the probe's velocity relative to the earth?

A. More than 0.9 c

B. 0.9 c

C. Less than 0.9 c but more than 0.3 c

D. 0.3 c

E. zero