The sliders A and B are connected by a light rigid bar of length .5m.\ and move with out friction in the horizontal slots shown. (**both slots lie on the horizontal plane there is no weight forceinvolved)**

For the position where Xa = .4m the velocity of A , Va = .9 m/s to the right.

Find: the acceleration of each slider ( A and B) and the force in the bar at the instant shown (Xa = .4m)

Length .5m

P = 40N

Xa=.4m

2 kg

A

B

3 kg