The track diagrams below show the movement of two objects along the same reference frame, but starting at different locations. **Object A moves to the right and Object B moves to the left.** The location of each object is **marked every 0.5 seconds**. Each box represents 1 m. 

**B**

**A**

1. Describe the motion of each object (left/right, speed up/slow down).
2. Does either object accelerate? If so, is the acceleration positive or negative?
3. What is the velocity of object B?
4. What is the displacement of each object after 2 seconds?
5. Are the two objects ever in the same place at the same time?
6. What are the average velocities of object A for the first and the last second of the trip?
7. What is the total time of travel for each object?

Draw motion diagrams for each object above. Be sure to label vi, vf, ti, tf, a, xi, and xf.



