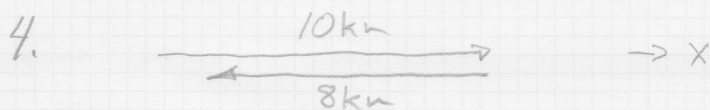


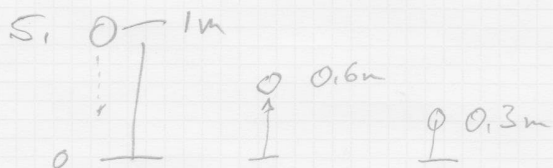
1. a. Displacement  
b. Position  
c. (None of the above) or Speed 0 m/s

2.  $\Delta X = 0$

3. a.  $X_i = 0 \text{ km}$  (or any other number you choose).  
b.  $X_f = 10 \text{ km}$  (or 10 km greater than previous value)  
c.  $\Delta X = X_f - X_i = 10 \text{ km} - 0 \text{ km}$   
 $\Delta X = 10 \text{ km}$



- a.  $X(30 \text{ min}) = 10 \text{ km}$
- b.  $\Delta X(30 \text{ min}) = 10 \text{ km}$
- c.  $X_f = 2 \text{ km}$
- d.  $\Delta X(30-60 \text{ min}) = -8 \text{ km}$
- e. Distance =  $10 \text{ km} + 8 \text{ km} = 18 \text{ km}$

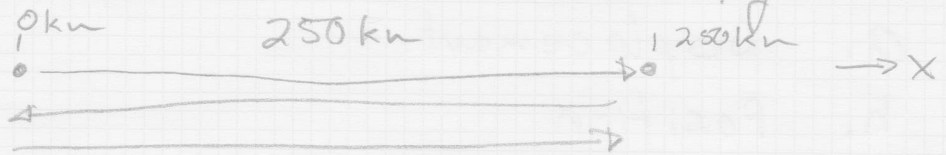


- a.  $\Delta X = X_f - X_i = 0.3 \text{ m} - 1 \text{ m} = -0.7 \text{ m}$   
 $\Delta X = -0.7 \text{ m}$
- b.  $d = 1 \text{ m} + 2(0.6 \text{ m}) + 0.3 \text{ m} = 2.5 \text{ m}$   
 $d = 2.5 \text{ m}$

6.

Montreal

QC City



$$\Delta x = x_f - x_i = 250 \text{ km} - 0 \text{ km}$$

$$\Delta x = 250 \text{ km}$$

$$d = 3(250 \text{ km}) = 750 \text{ km}$$

$$\frac{\Delta x}{d} = \frac{250 \text{ km}}{750 \text{ km}} = \frac{1}{3}$$

$$\boxed{\frac{\Delta x}{d} = \frac{1}{3}}$$