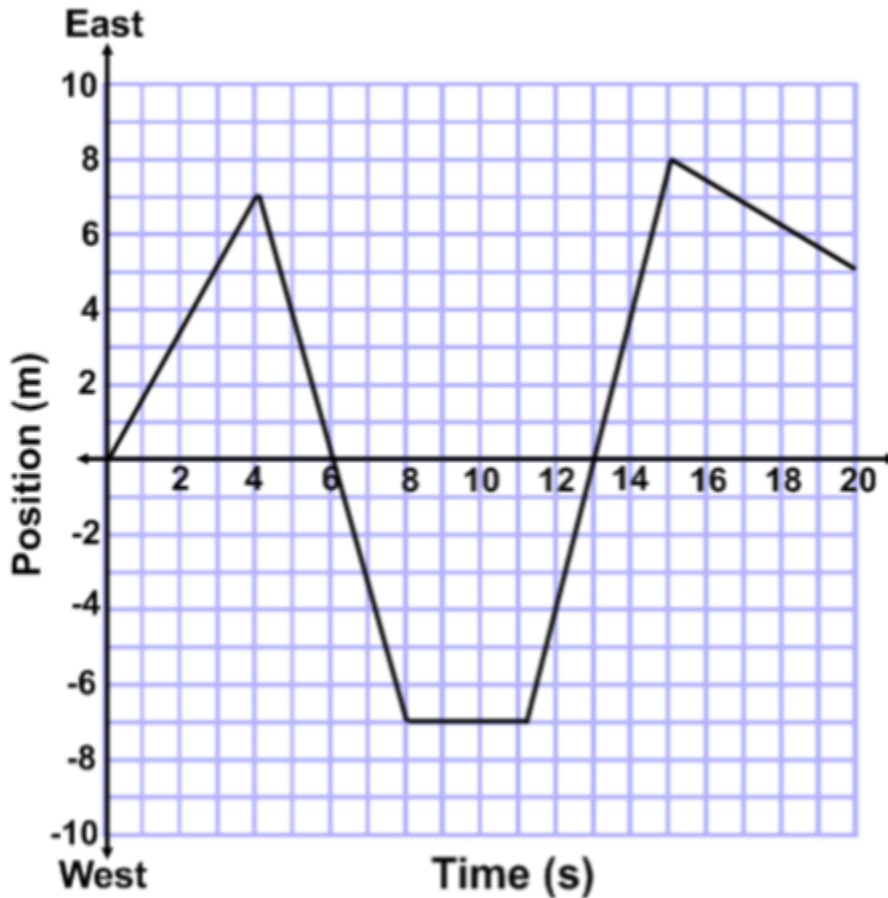


- Describe what is meant by frame of reference and why it is important.
- Define scalars and vectors. Provide three examples of each.
- A football is thrown 35 m [W], 60 m [E], 12 m [E], 45 m [W] and finally 75 m [W]. All of this happens in 62 seconds. Calculate the average speed and velocity of the football.
- Use the Graph below to answer the following questions:



- Calculate the velocity between 4 & 6 seconds.
- At what time(s) was the object back at the starting position?
- At what time(s) did the object change direction?
- Calculate the total distance traveled during the 20 seconds.
- Calculate the average speed and velocity for the 20 seconds.