

NAME _____

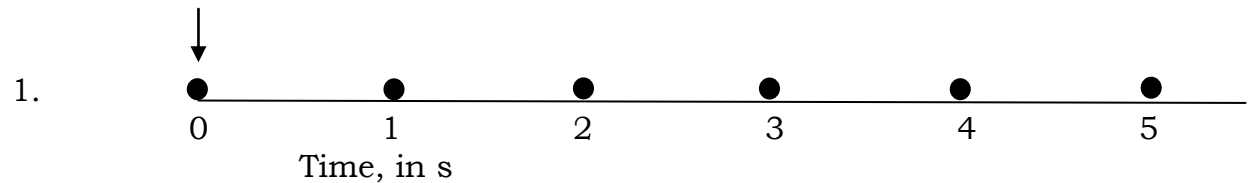
BLOCK _____

DATE _____

Dot Diagrams of Motion Worksheet

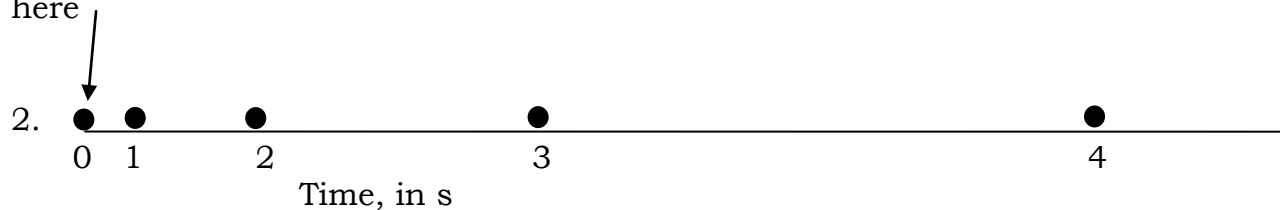
The 3 dot diagrams below represent the motion of 3 different motion events. In each case, the object is moving in a straight line, starting at the position $d = 0$ cm at time 0 s. As the object moved to the right, its position it was at is marked with a dot for each 1 second interval. First you will use the time and distance information represented below to create 3 motion graphs for each line. In 3 different ways, these 3 motion graphs (d vs. t , v vs. t , and a vs. t) each provide unique information about the object's motion.

$d = 0$ cm here



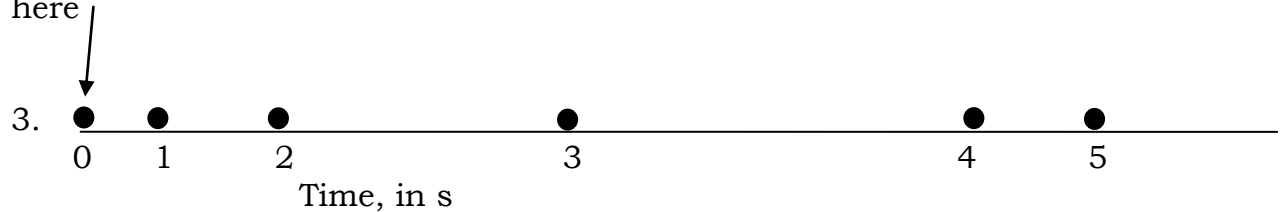
ANSWER

$d = 0$ cm here



ANSWER

$d = 0$ cm here



ANSWER

Finally, describe each motion event represented above in each diagram, using the phrases below (a, b, and c), by placing the letters, placing your answer on the corresponding 'ANSWER' line. More than one choice may apply to a diagram. For example, an answer might read "first c, then b".

- a. the acceleration is positive
- b. the acceleration is negative
- C. the acceleration is zero (that is the velocity is constant)

Name: _____ Block: _____ Date: _____

The motion described below is that of _____

t	d, cm	

distance																			

time

t _a	t _{interval}	v _a , cm/s

velocity/speed																			

time

t _a	t _{interval}	a _a , cm/s ²

acceleration																			

time

The motion described below is that of _____

t	d, cm	

distance																			

time

t _a	t _{interval}	v _a , cm/s

velocity/speed																			

time

t _a	t _{interval}	a _a , cm/s ²

acceleration																			

time