

Physics 151 Class Exercise: Kinematics Graphs

1. An expectant father paces back and forth producing the position-versus-time graph shown here.

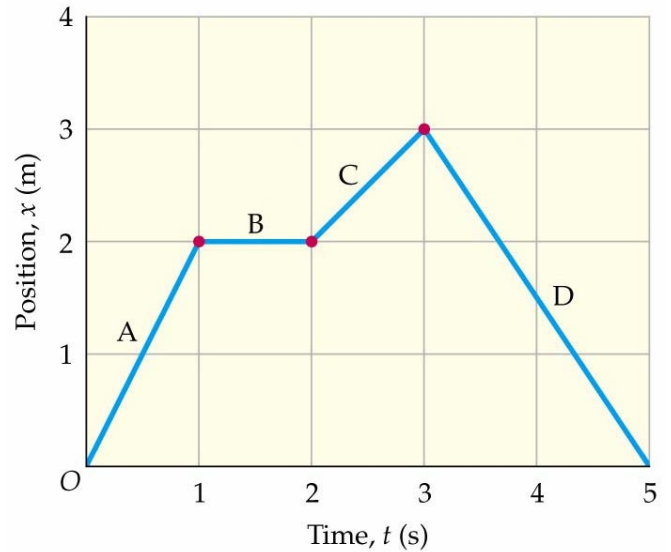
(a) Without performing a calculation indicate whether the father's velocity is positive, negative, or zero on the segments of the graph labeled A, B, C, and D.

Segment A:

Segment B:

Segment C:

Segment D:



(b) Calculate the average velocity for each segment and show that your results verify your answers to part (a).

Segment A:

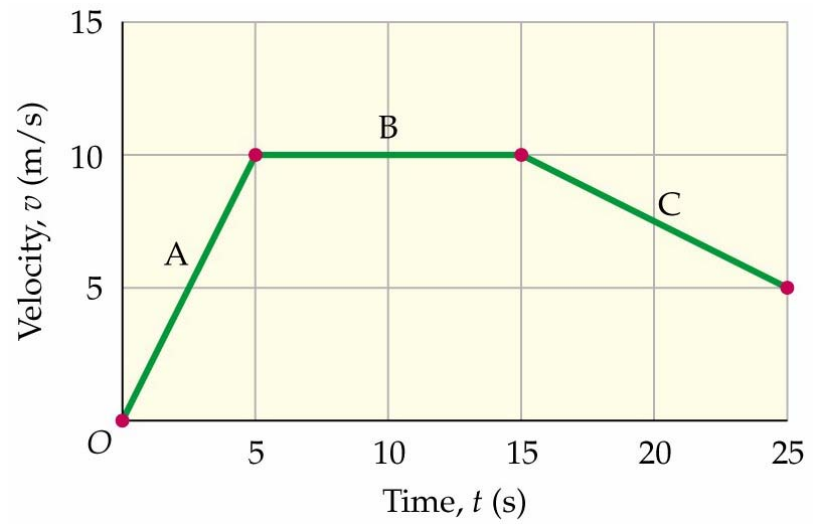
Segment B:

Segment C:

Segment D:

2. A motorcycle moves according to the velocity-versus-time graph shown. Find the displacement of the motorcycle for each of the segments A, B, and C.

Segment A:



Segment B:

Segment C: