

(b) (5 points) Find equations of the lines AC and DB and use them to find the coordinates of the point D. Then find the distance AD.

Even AC: point A(3,0) slope = 
$$\frac{2-0}{15-3} = \frac{1}{6}$$
  
 $y=0 = \frac{1}{6}(x-3)$   
 $y=0 = -\frac{1}{6}(x-3)$   
 $y=0 = -6(x-13)$   
 $y=0 = -6(x-13)$   
 $y=0 = -6(x-13)$   
 $y=0 = -6(x-3)$   
 $y=0 = -\frac{1}{7} = -6$   
 $y=0 = -\frac{1}{7} = -\frac{1}{7} = -6$   
 $y=0 = -\frac{1}{7} = -\frac{1}{7} = -\frac{1}{7}$   
 $y=0 = -\frac{1}{7} = -\frac{1}$ 

(c) (2 points) Find the distance AD using similar triangles. State the pair of similar triangles and write the ratios. Hopefully, you got the same answer as part (b). Don't panic if you did not.

$$\begin{array}{ccc} \Delta & ADB & \underline{IABI} & \underline{IADI} & \underline{IAO} \\ \Delta & AEC & \underline{IACI} & \underline{IACI} & \underline{IAEI} & \underline{SO} & \underline{10} & \underline{IAOI} \\ \underline{SO} & \underline{IACI} & \underline{IAEI} & \underline{SO} & \underline{10} & \underline{IAOI} \\ \underline{SO} & \underline{IADI} & \underline{BO} & \underline{IAEI} & \underline{SO} & \underline{10} & \underline{IAOI} \\ \underline{SO} & \underline{IADI} & \underline{BO} & \underline{IAOI} & \underline{IAEI} \end{array}$$

(d) (1 point) Find the time when the particle reaches the point D.

speed is 2 so all 
$$t = \frac{60/137}{2} = \frac{30}{137}$$
 seconds