Name:

PHYS 11

t = 0; t = 90; t = 180; t = 270; t = 360

t = 0; t = 90; t = 180; t = 270; t = 360

Test 3 Trajectories



Exercise 1 The position, velocity and acceleration of a mobile are given by: $\vec{x} = \begin{pmatrix} 7\cos(t) \\ 4\sin(t) \end{pmatrix} \qquad \vec{v} = \begin{pmatrix} -7\sin(t) \\ 4\cos(t) \end{pmatrix} \qquad \vec{a} = \begin{pmatrix} -7\cos(t) \\ -4\sin(t) \end{pmatrix}$

1) Draw the position of the mobile for

- 2) Draw the velocity of the mobile for
- 3) Draw the acceleration of the mobile for t = 0; t = 90; t = 180; t = 270; t = 360
- 4) Complete the trajectory.



The position, velocity and acceleration of a mobile are given by:



1) Draw the position of the mobile for

t = 0; t = 1; t = 2; t = 3

- 2) Draw the velocity of the mobile for
- t = 0; t = 1; t = 2; t = 3
- 3) Complete the trajectory.





1) Draw the position of the mobile for

t = 0; t = 1; t = 2

2) Draw the velocity of the mobile for t = 0; t = 1; t = 2

- 3) Draw the acceleration of the mobile for t = 0; t = 1; t = 2
- 4) Complete the trajectory.