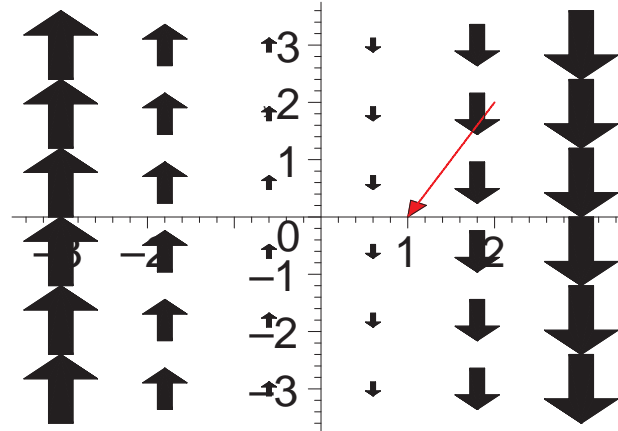For the picture below find:

A The equation of the vector field $\vec{F}$.

BC The parameteric equation of the curve C in red.

D Is the $\int_C \vec{F} \cdot \vec{dr}$ positive, negative or zero?

Answers

A $\vec{F} = \langle 0, -x \rangle$

BC Let $P(2,2)$, $Q(1,0)$, so $\vec{PQ} = \langle -1, -2 \rangle$ and hence we get $x = 2 - t$, $\quad y = 2 - 2t$ $\quad 0 \le t \le 1$

D Positive