

MATH 201-Sec14- Quiz 1

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1 Exercise 1(4 points)

Eliminating the parameter, find the Cartesian equation of the following curve and sketch it with an arrow the direction in which the curve is traced as the parameter increases

$$x = \sqrt{t + \frac{1}{2}}, y = -\sqrt{t - \frac{1}{2}} \text{ for } t \geq \frac{1}{2}.$$

2 Exercise 2(6 points)

Find the equations of the two tangent lines to the curve defined on $[-\pi, \pi]$ by $x = 2t - \pi \sin t$ and $y = 2 - \pi \cos t$ at the point $(0, 2)$.