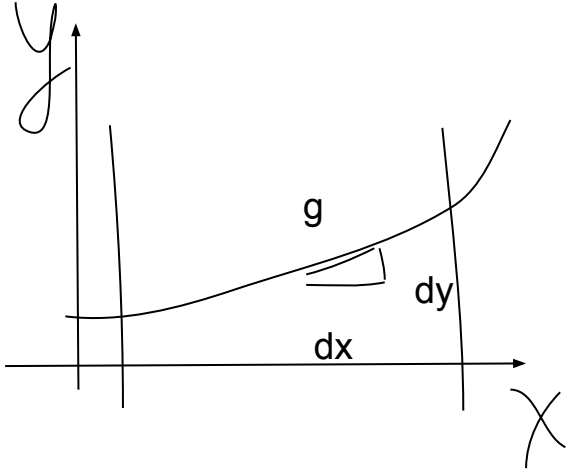


параметрически

$$x = \phi(t)$$
$$y = q(t)$$



$$g^2 = dy^2 + dx^2 = (d\phi)^2 + (dq)^2 = [(d\phi)^2 + (dq)^2] (dt)^2 / (dt)^2$$

$$g = \sqrt{[(d\phi)^2 + (dq)^2] (dt)^2 / (dt)^2} = \sqrt{[(d\phi)^2 + (dq)^2] / (dt)^2} \cdot (dt) =$$
$$\sqrt{[(d\phi/dt)^2 + (dq/dt)^2]} \cdot (dt) = \sqrt{[(\phi')^2 + (q')^2]} \cdot (dt)$$