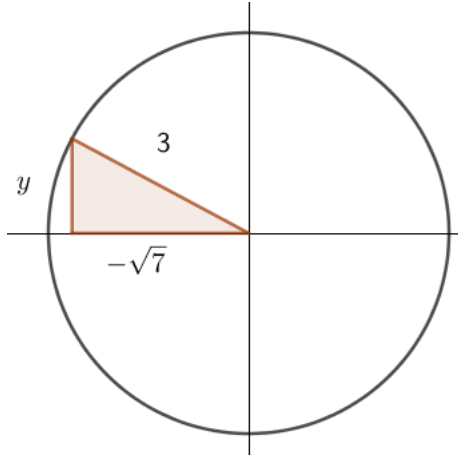Given that $cosx = -\frac{\sqrt{7}}{3}$ and $\frac{\pi}{2} \le x \le \pi$, find the possible values of $sinx$ and $tanx$

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x is in the second quadrant
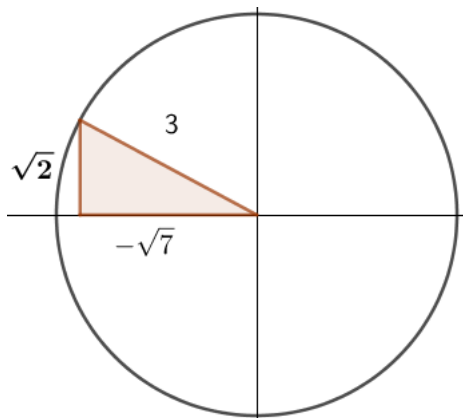

Using Pythagoras' Theorem:

$$y^2 + \left(-\sqrt{7}\right)^2 = 3^2$$

$$y^2 = 9 - 7$$

$$y = \sqrt{2}$$

$$sinx = \frac{\sqrt{2}}{3}$$

$$tanx = \frac{\sqrt{2}}{-\sqrt{7}}$$

$$tanx = -\frac{\sqrt{2}\sqrt{7}}{7} = \frac{-\sqrt{14}}{7}$$