

41. $\tan t \cdot \cos t = \sin t$ is positive in quadrant II.

43. $\frac{\tan t \cdot \sin t}{\cot t} = \tan t \cdot \frac{1}{\cot t} \cdot \sin t = \tan t \cdot \tan t \cdot \sin t = \tan^2 t \cdot \sin t$. Since $\tan^2 t$ is always positive and $\sin t$ is negative in quadrant III, the expression is negative in quadrant III.

45. quadrant II

47. quadrant II