A particle is projected with speed $15\,\mathrm{m\,s^{-1}}$ at an angle of $\theta°$ above the horizontal. At the instant 4 s after projection the speed of the particle is $30\,\mathrm{m\,s^{-1}}$.

**(i)** Find $\theta$. [4]

**(ii)** Show that at the instant 4 s after projection the particle is 33.75 m below the level of the point of projection and find the direction of motion at this instant. [4]