A boy whirls a stone in a horizontal circle 1.8m above ground by means of a spring 1.2m long. The spring breaks and the stone fly off horizontally, striking the ground 9.1m away. Find the centripetal acceleration during the circular motion?

Equations for projective motion:

$$vt = l$$

$$h = \frac{gt^2}{2}$$

where $l = 9.1\ m, h = 1.8\ m$

Therefore, initial speed of stone equals:

$$v = \frac{l}{\sqrt{2 * \frac{h}{g}}}$$

And centripetal acceleration:

$$a = \frac{v^2}{r} = \frac{l^2 g}{2rh} = 188\ m/s^2$$

Answer: $188\ m/s^2$