A horizontal force of 60N acts on a stationary snooker ball of mass 0.2kg.The cue is in contact with the ball for 8/s(0.008s).Calculate the speed of the ball after impact.

Using second Newton's law:

$$F\Delta t = \Delta p = mv$$

Where F – applied force, Δt contact time, Δp – momentum's change.

$$v = \frac{F\Delta t}{m}$$

$$v = \frac{60N * 0.008s}{0.2kg} = 2.4\ m/s$$

Answer: $v = 2.4\ m/s$