

- 14 Water is pumped through a nozzle at the end of a hose. The nozzle has a circular cross-section of diameter 50 mm. A mass of 100 kg of water takes a time of 2.0 s to move through the nozzle. The density of water is 1000 kg m^{-3} .

What is the speed of the water in the nozzle?

A 6.4 ms^{-1}

B 13 ms^{-1}

C 25 ms^{-1}

D 51 ms^{-1}