A gas mixture contains hydrogen, helium, neon, and argon. The total pressure of the mixture is 93.6 kpa. The partial pressures of helium, neon, and argon are 15.4 kpa and 35.6 kpa. What is the pressyre exerted by hydrogen?

Solution:

The total pressure of the mixture calculates of the equation:

$P_t = \sum P_i$.

Because, P(He+Ne)= 15.4 kPa, and P(Ar)= 35.6 kPa the partial pressures of hydrogen is

$P(H_2)$=93.6-15.4-35.6=42.6 kPa.

Answer:

The partial pressure of hydrogen is 42.6 kPa.