

- 12** Container X contains neon and container Y contains argon. The two containers are identical, and the two gases are at the same temperature. The pressure in X is twice that in Y.

What is the ratio of the mean kinetic energy of a neon molecule to the mean kinetic energy of an argon molecule?

[The relative atomic masses of neon and argon are 20 and 40 respectively.]

- A** 0.5                      **B** 1                      **C** 2                      **D** 4

- 13** The density of helium at 150 kPa is  $0.178 \text{ kg m}^{-3}$ . What is the root mean square speed of its