

- 8 A pure sample of a gas has a density of 2.62 g dm^{-3} at $101\,000 \text{ Pa}$ and 25°C . The gas behaves ideally under these conditions.

Which expression gives the M_r of the gas?

A
$$\frac{101\,000 \times 0.001}{2.62 \times 8.31 \times 25}$$

B
$$\frac{101\,000 \times 0.001}{2.62 \times 8.31 \times 298}$$

C
$$\frac{2.62 \times 8.31 \times 25}{101\,000 \times 0.001}$$

D
$$\frac{2.62 \times 8.31 \times 298}{101\,000 \times 0.001}$$