

- 17 Two monoatomic ideal gases X and Y are mixed together in a sealed container. The molar mass of Y is twice that of X. At thermodynamic temperature  $T$ , the kinetic energy and root-mean-square speed of an atom of X are given by  $E$  and  $V$  respectively.

What is the kinetic energy and root-mean-square speed of an atom of Y at temperature  $T$ ?

	kinetic energy	root-mean-square speed
A	$E$	$0.71V$
B	$E$	$V$
C	$E$	$1.4V$
D	$2E$	$0.71V$