

$$\begin{aligned}6 \text{ (iv)} \quad & 998^2 \\ & = (1000 - 2)^2 \\ & = 1000^2 - 2 \times 1000 \times 2 + 2^2 \\ & = 1000000 - 4000 + 4 \\ & = 1000004 - 4000 \\ & = 996004\end{aligned}$$

$$\begin{aligned}6 \text{ (v)} \quad & 5.2^2 \\ & = (5 + 0.2)^2 \\ & = 5^2 + 2 \times 5 \times 0.2 + (0.2)^2 \\ & = 25 + 2 + 0.04 \\ & = 27.04\end{aligned}$$

$$\begin{aligned}6 \text{ (vi)} \quad & 297 \times 303 \\ & = (300 - 3)(300 + 3) \\ & = 300^2 - 3^2 \\ & = 90000 - 9 \\ & = 89991\end{aligned}$$

$$\begin{aligned}6 \text{ (vii)} \quad & 78 \times 82 \\ & = (80 - 2)(80 + 2) \\ & = 80^2 - 2^2 \\ & = 6400 - 4 \\ & = 6396\end{aligned}$$