

$$\begin{aligned}6 \text{ (viii)} \quad & 8.9^2 \\ & = (9 - 0.1)^2 \\ & = 9^2 - 2 \times 9 \times 0.1 + (0.1)^2 \\ & = 81 - 1.8 + 0.01 \\ & = 81.01 - 1.8\end{aligned}$$

$$\begin{aligned}6 \text{ (ix)} \quad & 1.05 \times 9.5 \\ & = (10 + 0.05)(10 - 0.5) \frac{1}{10} \\ & = \frac{10^2 - 0.5^2}{10} \\ & = \frac{100 - 0.25}{10} \\ & = \frac{99.75}{10} \\ & = 9.975\end{aligned}$$

$$\begin{aligned}7 \text{ (i)} \quad & 51^2 - 49^2 \\ & = (51 - 49)(51 + 49) \\ & = 2 \times 100 \\ & = 200\end{aligned}$$

$$\begin{aligned}7 \text{ (ii)} \quad & (1.02)^2 - (0.98)^2 \\ & = (1.02 - 0.98)(1.02 + 0.98) \\ & = 0.04 \times 2 \\ & = 0.08\end{aligned}$$