

$$\begin{aligned} \text{10} \quad & 3^2 \times 3^4 \times 3^8 \\ & = 3^{2+4+8} \\ & = 3^{14} \end{aligned}$$

$$\begin{aligned} \text{1(VII)} \quad & a^4 \times b^4 \\ & = (ab)^4 \end{aligned}$$

$$\begin{aligned} \text{11} \quad & 6^{15} \div 6^{10} \\ & = 6^{15-10} \\ & = 6^5 \end{aligned}$$

$$\begin{aligned} \text{1(VIII)} \quad & (3^4)^3 \\ & = 3^{4 \times 3} \\ & = 3^{12} \end{aligned}$$

$$\begin{aligned} \text{12} \quad & a^3 \times a^2 \\ & = a^{3+2} \\ & = a^5 \end{aligned}$$

$$\begin{aligned} \text{1(X)} \quad & (2^{20} \div 2^{15}) \times 2^3 \\ & = 2^{20-15} \times 2^3 \\ & = 2^{5+3} \\ & = 2^8 \end{aligned}$$

$$\begin{aligned} \text{13} \quad & 7^x \times 7^2 \\ & = 7^{x+2} \end{aligned}$$

$$\begin{aligned} \text{1(XI)} \quad & 8^t \div 8^2 \\ & = 8^{t-2} \end{aligned}$$

$$\begin{aligned} \text{14} \quad & (5^2)^3 \div 5^3 \\ & = 5^6 \div 5^3 \\ & = 5^{6-3} \\ & = 5^3 \end{aligned}$$

$$\begin{aligned} \text{15} \quad & 2^5 \times 5^5 \\ & = (2 \times 5)^5 \\ & = 10^5 \end{aligned}$$