

Solution to Question 4

$$\begin{aligned}\left(\frac{p^2q^4}{r^{-4}}\right)^2 \div \left(\frac{p^4q^2}{r^4}\right)^{-2} &= (p^2q^4r^4)^2 \times \left(\frac{p^4q^2}{r^4}\right)^2 \\&= p^{2 \times 2} q^{4 \times 2} r^{4 \times 2} \times p^{4 \times 2} q^{2 \times 2} r^{-4 \times 2} \\&= p^4 q^8 r^8 \times p^8 q^4 r^{-8} \\&= p^{(4+8)} q^{(8+4)} r^{(8-8)} \\&= p^{12} q^{12}\end{aligned}$$

Check whether this is among the suggested answers.

