

$$1a) \frac{1}{5^{-2}} = 5^2 = 25$$

$$1b) 5^{-2} = \frac{1}{5^2} = \frac{1}{25}$$

$$1c) k^{-2} = \frac{1}{k^2}$$

$$2a) \begin{array}{c} 7m^0 + n^0 \\ \downarrow \quad \downarrow \\ 7 \cdot 1 + 1 \\ 7 + 1 \\ 8 \end{array}$$

$$2b) \begin{array}{c} -3^0 \\ \downarrow \\ -1 \end{array}$$

$$3) \frac{5 \cancel{10} u^5 v^6 \cancel{w^0}}{\cancel{2} u^7 v^{-10}} = \frac{5 v^{10} v^6}{u^2} = \frac{5 v^{16}}{u^2}$$

$$4) (3x^{-10} y^2)(6x^{-7} y^6)$$

$$18 x^{-10-7} y^{2+6}$$

$$18 x^{-17} y^8 = \frac{18 y^8}{x^{17}}$$

$$5) \left(\frac{p^1 q^{-3}}{p^{-5} q^4} \right)^{-4} = \left(\frac{p^1 p^5}{q^3 q^4} \right)^{-4} = \left(\frac{p^6}{q^7} \right)^{-4} = \left(\frac{q^7}{p^6} \right)^4 = \frac{q^{28}}{p^{24}}$$

$$6) \left(\frac{3 m^0 n^{-3}}{5 m^4 n^1} \right)^2 = \left(\frac{3}{5 m^4 n^3 n^1} \right)^2 = \left(\frac{3}{5 m^4 n^4} \right)^2 = \frac{9}{25}$$

$$7) \left(\frac{c d^{-5}}{c^{-2} d^9} \right)^{-2}$$

$$8a) y^8 y^{-5} y^{-10}$$

$$8b) 7^{-9} \cdot 7^{11}$$

$$9) (4x^0 y^3)^{-2}$$

$$10) 3^{-2} + 2^{-1}$$

$$11a) -3a^4 b^{-7}$$

$$11b) \frac{5}{r^{-2}}$$