

☺ Simplify the following.

(1)  $(a^5)^3$

(2)  $(b^2)^4$

(3)  $(c^{-6})^5$

(4)  $(x^2)^{-8}$

(5)  $(y^{-3})^{-2}$

☺ Simplify the following.

(6)  $(a^2b^3)^5$

(7)  $(x^3y)^2$

(8)  $(a^{-2}b^{-3})^{-2}$

(9)  $(m^5n^{-1})^{-3}$

(10)  $(c^{-3}d^2)^6$

☺ Simplify the following.

(11)  $(x^2y^{-2}z^3)^5$

(12)  $(m^3nk^6)^2$

(13)  $(c^5d^2e^{-3})^{-2}$

(14)  $(a^{-2}b^{-3}c^5)^{-3}$

(15)  $(x^4y^3z^2)^5$

☺ Simplify the following.

(16)  $(3a^2b^3)^3$

(17)  $(-2a^{-2}b^3c^2)^2$

(18)  $(-3x^3y^{-2}z^3)^3$

(19)  $(5m^2n^{-3}p^4)^{-2}$

(20)  $(-4a^3b^4c^{-2})^{-3}$

☺ Simplify the following.

$$(21) (2a^2b^3)^2 \times (3a^3b^{-2})^2$$

$$(22) (-x^2y^3)^3 \times (-2x^{-2}y^2)^2$$

$$(23) (3m^3n^5)^2 \times (-2m^2n^{-2})^3$$

$$(24) (2x^3y^2)^{-2} \times (2x^5y)^4$$

$$(25) (4a^3b^2)^2 \times (-2a^2b^{-2})^3$$

☺ Simplify the following.

$$(26) (8a^2b^3)^3 \div (2a^3b^{-2})^2$$

$$(27) (9x^{-2}y^2)^2 \div (3x^{-2}y^{-2})^4$$

$$(28) (2m^2n^{-2})^3 \times (4m^2n^2)^2 \div (8m^3n^{-3})^2$$

$$(29) (6x^3y^{-2}z^4)^2 \div (3x^{-2}y^3z^2)^2 \times (-2x^3y^{-2}z^{-1})^3$$

$$(30) (4a^{-2}b^{-3}c^2)^{-2} \div (2a^3b^2c^{-2})^{-2} \div (3a^2b^{-3}c^3)^2$$

☺ Simplify the following.

$$(31) \left(\frac{1}{a}\right)^3$$

$$(32) \left(\frac{1}{a^2}\right)^2$$

$$(33) \left(\frac{1}{m^{-2}}\right)^4$$

$$(34) \left(\frac{1}{n^3}\right)^{-2}$$

$$(35) \left(\frac{1}{x^{-2}}\right)^{-5}$$

☺ Simplify the following.

$$(36) \left(\frac{b^3}{a^{-2}}\right)^3$$

$$(37) \left(\frac{m^{-3}}{n^2}\right)^4$$

$$(38) \left(\frac{x^{-2}}{y^{-3}}\right)^5$$

$$(39) \left(\frac{c^2}{d^{-2}}\right)^{-3}$$

$$(40) \left(\frac{a^{-4}}{b^{-2}}\right)^{-2}$$

☺ Simplify the following.

$$(41) \left( \frac{a^{-2}b}{c^3} \right)^2$$

$$(42) \left( \frac{m^2n^{-3}}{p^{-2}} \right)^4$$

$$(43) \left( \frac{x^{-3}}{y^2z^3} \right)^{-2}$$

$$(44) \left( \frac{c^5d^{-2}}{e^{-3}f^2} \right)^{-3}$$

$$(45) \left( \frac{b^{-3}k^5}{h^2a^{-5}} \right)^2$$

☺ Simplify the following.

$$(46) \left( \frac{2a^2b^{-2}}{3c^2} \right)^3$$

$$(47) \left( \frac{-3x^{-2}y}{2z^{-3}} \right)^3$$

$$(48) \left( \frac{12m^2n^{-2}}{-8a^{-3}b^4} \right)^{-2}$$

$$(49) \left( \frac{4a^4b^3}{5c^{-2}d^{-3}} \right)^{-3}$$

$$(50) \left( \frac{6h^{-2}k^{-3}}{-2m^2n^3} \right)^{-2}$$

☺ Simplify the following.

$$(51) \left(\frac{5a^3}{2b^2}\right)^2 \times \left(\frac{3b^4}{5a^3}\right)^3$$

$$(52) \left(\frac{4m^{-2}}{3n^2p^4}\right)^{-2} \times \left(\frac{2m^3p^{-2}}{3n^2}\right)^4$$

$$(53) \left(\frac{2x^2y^3}{5z^{-2}}\right)^3 \times \left(\frac{3x^{-2}}{4y^2z^3}\right)^{-2}$$

$$(54) \left(\frac{-x^3y^{-2}}{2a^4b^2}\right)^{-5} \times \left(\frac{3a^3b^3}{4x^2y^{-2}}\right)^{-2}$$

$$(55) \left(\frac{2m^2}{3n^{-3}}\right)^3 \div \left(\frac{5m^4}{4n^{-2}}\right)^2$$

☺ Simplify the following.

$$(56) \left(\frac{2a^2b^{-3}}{3c^4}\right)^4 \div \left(\frac{9a^5b^3}{4c^{-3}}\right)^{-2}$$

$$(57) \left(\frac{3x^2y^3z^4}{2x^{-2}y^{-2}z^{-3}}\right)^2 \div \left(\frac{3x^{-2}y^3z^{-2}}{4x^2y^4z^3}\right)^{-3}$$

$$(58) \left(\frac{6a^2b^{-2}}{5a^3c^3}\right)^2 \times \left(\frac{3a^{-3}b^2}{2b^3c^{-4}}\right)^3 \div \left(\frac{4b^{-2}c^{-3}}{3a^4c^2}\right)^{-2}$$

$$(59) \left(\frac{4a^3b^{-2}c^2}{3x^{-2}y^{-4}z^2}\right)^2 \div \left(\frac{3x^3y^{-4}z^{-2}}{5a^2b^{-2}c^3}\right)^{-2} \times \left(\frac{-a^3x^{-2}b^3}{c^2y^{-2}z^2}\right)^3$$

$$(60) \left(\frac{4xy^2z^2}{3m^4n^{-3}z^3}\right)^{-2} \div \left(\frac{3x^3m^{-2}}{4n^4y^5}\right)^2 \div \left(\frac{3m^3n^{-2}x^5}{-2y^3z^{-4}}\right)^{-2}$$