

Worksheet 2019-9EB-00005(2)

(1) Simplify and write your answer as a positive exponent:

(a) $(-3xy^{-3}k^0)^3$

(b) $\frac{a^{3\frac{1}{2}} \times a \times a^{\frac{1}{2}}}{b^3 \times b^{-6}}$

(c) $3^{x+2y} \cdot 9^{-y}$

(d) $\sqrt{9m^6 + 16m^6}$

(2) Simplify and write your answer as a positive exponent:

(a) $\frac{5^0 \times m^{12} \times n^4 \times n^{-2}}{m^5 \times m \times n^6}$

(b) $\frac{(5^3)^2 \times (5 \times 7)^3}{(7^2 \times 5^{-4})^{-1}}$

(3) (a) Write in scientific notation:

(i) $4\,320$ _____

(ii) $0,03166$ _____

(b) Write as a number:

(i) $1,1 \times 10^6$ _____

(ii) $5,08 \times 10^{-1}$ _____

(4) Simplify without using a calculator and write the answer in scientific notation:

(i) $(3,5 \times 10^{-5}) \div (7,0 \times 10^2)$

(ii) $(4,6 \times 10^3) + (3,2 \times 10^2)$

(5) Solve for x :

(a) $2^x = 8$

(b) $5^x = 1$

(c) $8^x = \frac{1}{16}$

(d) $x^4 = 81$
