Exercise 2018-8ℰC-00007(4)

(1) Choose the correct answer:

(a) $((-2^2)^3)^4$ = ...

A. -2^{24} B. $(-2)^9$ C. $(-2)^{24}$ D. -2^9

(b) $b^m \times 2b^n$ = ...

A. $2b^{2mn}$ B. $2b^{mn}$ C. $2^{mn}b^{mn}$ D. $2b^{m+n}$

(c) The scientific notation for $12\ 003$ is:

A. $1{,}2003 \times 10^3$ B. $1{,}23 \times 10^4$ C. $1{,}2003 \times 10^4$ D. 12×10^3

(2) Which of the following is equal to 1?

A. $4^0 \times 3^0 \times 2^0$ B. $4^0 + 3^0 + 2^0$ C. $4^0 - 3^0 + 2^0$ D. $4^0 \div 3^0 \div 2^0$

(3) Simplify the following by using exponential laws:

(a) $\left(\frac{a}{b}\right)^2 \times \left(\frac{b}{a}\right)^2$ (b) $\sqrt{5^{16m}2^{2mn}}$

(c) $(-2)^3 \times (-2)^4 \times (-1)^{18}$ (d) $-k^2(2k + 3p)^0$

(4) Calculate the value of P if $3^{2010} + 3^{2011} + 3^{2012} = \text{P}.3^{2010}$
Show all steps.

(5) Which of the following have the greater value?

A. $0{,}002$ C. $\sqrt{0,000004}$

B. $\frac{2}{10\ 000}$ D. $(0{,}02)^4$