

**A.APR.A.1: Multiplication of Powers 1a**

- 1 The expression  $2^3 \cdot 4^2$  is equivalent to
  - 1)  $2^7$
  - 2)  $2^{12}$
  - 3)  $8^5$
  - 4)  $8^6$
- 2 Which expression is equivalent to  $3^3 \cdot 3^4$ ?
  - 1)  $9^{12}$
  - 2)  $9^7$
  - 3)  $3^{12}$
  - 4)  $3^7$
- 3 The expression  $3^2 \cdot 3^3 \cdot 3^4$  is equivalent to
  - 1)  $27^9$
  - 2)  $27^{24}$
  - 3)  $3^9$
  - 4)  $3^{24}$
- 4 The product of  $3x^5$  and  $2x^4$  is
  - 1)  $5x^9$
  - 2)  $5x^{20}$
  - 3)  $6x^9$
  - 4)  $6x^{20}$
- 5 The product of  $2x^3$  and  $6x^5$  is
  - 1)  $10x^8$
  - 2)  $12x^8$
  - 3)  $10x^{15}$
  - 4)  $12x^{15}$
- 6 Which expression represents  $(3x^2y^4)(4xy^2)$  in simplest form?
  - 1)  $12x^2y^8$
  - 2)  $12x^2y^6$
  - 3)  $12x^3y^8$
  - 4)  $12x^3y^6$
- 7 The product of  $4x^2y$  and  $2xy^3$  is
  - 1)  $8x^2y^3$
  - 2)  $8x^3y^3$
  - 3)  $8x^3y^4$
  - 4)  $8x^2y^4$
- 8 The product of  $6x^3y^3$  and  $2x^2y$  is
  - 1)  $3xy^2$
  - 2)  $8x^5y^4$
  - 3)  $12x^5y^4$
  - 4)  $12x^6y^3$
- 9 The expression  $(x^2z^3)(xy^2z)$  is equivalent to
  - 1)  $x^2y^2z^3$
  - 2)  $x^3y^2z^4$
  - 3)  $x^3y^3z^4$
  - 4)  $x^4y^2z^5$

10 The product of  $3x^2y$  and  $-4xy^3$  is

- 1)  $-12x^3y^4$
- 2)  $12x^3y^4$
- 3)  $-12x^2y^3$
- 4)  $12x^2y^3$

11 What is the product of  $10x^4y^2$  and  $3xy^3$ ?

- 1)  $30x^4y^5$
- 2)  $30x^4y^6$
- 3)  $30x^5y^5$
- 4)  $30x^5y^6$

12 What is the product of  $3a^2b$  and  $-2ab^3$ ?

- 1)  $a^2b^3$
- 2)  $a^3b^4$
- 3)  $-6a^2b^3$
- 4)  $-6a^3b^4$

13 The expression  $(-2a^2b^3)(4ab^5)(6a^3b^2)$  is equivalent to

- 1)  $8a^6b^{30}$
- 2)  $48a^5b^{10}$
- 3)  $-48a^6b^{10}$
- 4)  $-48a^5b^{10}$

14 What is the product of  $\frac{1}{3}x^2y$  and  $\frac{1}{6}xy^3$ ?

- 1)  $\frac{1}{2}x^2y^3$
- 2)  $\frac{1}{9}x^3y^4$
- 3)  $\frac{1}{18}x^2y^3$
- 4)  $\frac{1}{18}x^3y^4$

15 The product of  $6x^a$  and  $x$  is

- 1)  $6x^a$
- 2)  $6x^{a+1}$
- 3)  $6x^{a^2}$
- 4)  $6x^{2a}$

16 If  $x = 5^a$ , then the value of  $5x$  is

- 1)  $x + 1$
- 2)  $6^a$
- 3)  $a + 5$
- 4)  $5^{a+1}$

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**Answer Section**

1 ANS: 1

$$2^3 \cdot 4^2 = 2^3 \cdot (2^2)^2 = 2^3 \cdot 2^4 = 2^7$$

REF: 069911a

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|-----------|-----------------|
| 2 ANS: 4  | REF: 011020ia   |
| 3 ANS: 3  | REF: 060312a    |
| 4 ANS: 3  | REF: 010306a    |
| 5 ANS: 2  | REF: 080001a    |
| 6 ANS: 4  | REF: 080903ia   |
| 7 ANS: 3  | REF: 089906a    |
| 8 ANS: 3  | REF: 061401ia   |
| 9 ANS: 2  | REF: 010008a    |
| 10 ANS: 1 | REF: 010205a    |
| 11 ANS: 3 | REF: 080605a    |
| 12 ANS: 4 | REF: 081401ia   |
| 13 ANS: 3 | REF: 010910a    |
| 14 ANS: 4 | REF: 060604a    |
| 15 ANS: 2 | REF: 060328siii |
| 16 ANS: 4 | REF: 018926siii |