

## 8.EE.A.1 Simplify Expressions Involving Powers of Powers

8.EE.A.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions.

1. Simplify the product:  $(4ab^4)^3(ab)^2$

[A]  $4a^5b^{14}$

[B]  $64a^5b^{14}$

[C]  $64a^5b^6$

[D]  $4a^4b^{14}$

Simplify:

5.  $(4b^6c^5d^2)^3$

2. Simplify the product:  $(2pq^3)^2(pq)^5$

[A]  $4p^7q^8$

[B]  $4p^7q^{11}$

[C]  $2p^7q^{11}$

[D]  $2p^3q^{11}$

6.  $(3f^2g^6h^3)^4$

3. Simplify the product:  $(3jk^6)^4(jk)^4$

[A]  $81j^8k^{28}$

[B]  $81j^8k^{10}$

[C]  $3j^8k^{28}$

[D]  $3j^5k^{28}$

8.  $(4d^5e^6f^2)^2$

4. Simplify the product:  $(2yz^2)^2(yz)^6$

[A]  $4y^8z^{10}$

[B]  $2y^8z^{10}$

[C]  $4y^8z^8$

[D]  $2y^3z^{10}$

9.  $(2v^4wx^3)^2$

10.  $(5x^5y^2z^6)^3$

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### Answer Key

8.EE.A.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions.

[1] B \_\_\_\_\_

[2] B \_\_\_\_\_

[3] A \_\_\_\_\_

[4] A \_\_\_\_\_

[5]  $64b^{18}c^{15}d^6$  \_\_\_\_\_

[6]  $81f^8g^{24}h^{12}$  \_\_\_\_\_

[7]  $125e^{15}f^{12}g^3$  \_\_\_\_\_

[8]  $16d^{10}e^{12}f^4$  \_\_\_\_\_

[9]  $4v^8w^2x^6$  \_\_\_\_\_

[10]  $125x^{15}y^6z^{18}$  \_\_\_\_\_