

Name Answer Key
 Notes: Exponents Day #2

Date _____
 Period _____

1) What is the product of $-3x^2y$ and $(5xy^2 + xy)$?

- (A) $-15x^3y^3 - 3x^3y^2$
- (B) $-15x^3y^3 - 3x^3y$
- (C) $-15x^2y^2 - 3x^3y$
- (D) $-15x^3y^3 - 3xy$

$$\begin{array}{l}
 -15x^{2+1}y^{1+2} - 3x^{2+1}y^{1+1} \\
 \boxed{-15x^3y^3 - 3x^3y^2}
 \end{array}$$

2) Simplify: $x^2y(x^3 - y)$

$$\begin{array}{l}
 x^{2+3}y - x^2y^{1+1} \\
 \boxed{x^5y - x^2y^2}
 \end{array}$$

3) Simplify: $ab(3a + 2b)$

$$\begin{array}{l}
 3a^{1+1}b + 2ab^{1+1} \\
 \boxed{3a^2b + 2ab^2}
 \end{array}$$

4) Simplify: $4x^3y^2z(2x^2yz^2 + 3xz)$

$$\begin{array}{l}
 8x^5y^3z^3 + 12x^4y^2z^2
 \end{array}$$

5) What is the product of $-3x^3y^4z^8(-6x^4y^9z^6 - 5x^{10}y^5z)$

$$\begin{array}{l}
 18x^7y^{13}z^{14} + 15x^{13}y^9z^9
 \end{array}$$

6) Find the product of $9x^3y$ and $(3x^5y - 5x^7y^2 + 4x^6y^6)$

$$\begin{array}{l}
 27x^8y^2 - 45x^{10}y^3 + 36x^9y^7
 \end{array}$$