

# Simplifying Expressions with Exponents

Name: \_\_\_\_\_ Score: \_\_\_\_\_

Simplify the following expressions.

$$3r(r^2 + 4)$$

$$2x(-8x^2 + 2)$$

$$2y(-3y - 9)$$

$$-2z(-6z - 1)$$

$$4q(-4 + 3q)$$

$$-2d(-2d^2 + 5d)$$

$$-v(-4v + 4v^2)$$

$$2a(-6a^2 + 6c)$$

$$-4k(-5 - k)$$

$$3r(6 + 6r^2)$$

$$-d(-3d + 4)$$

$$-2g(2g^2 + 4g)$$

$$3x^2(5 - 2x)$$

$$2h(6h + 5)$$

$$6e(5v - 5e)$$

$$4b(-3b + 9b)$$

$$5(3q + 5q)$$

$$2n(3n^2 + 5)$$

$$-3m^2(-1 + m)$$

$$2r(2r^4 + 5)$$

$$8v(-2v^2 + 4f)$$

# Answers

Simplify the following expressions.

$$3r(r^2 + 4)$$
$$3r^3 + 12r$$

$$2x(-8x^2 + 2)$$
$$-16x^3 + 4x$$

$$2y(-3y - 9)$$
$$-6y^2 - 18y$$

$$-2z(-6z - 1)$$
$$12z^2 + 2z$$

$$4q(-4 + 3q)$$
$$12q^2 - 16q$$

$$-2d(-2d^2 + 5d)$$
$$-4d^3 - 10d^2$$

$$-v(-4v + 4v^2)$$
$$-4v^3 + 4v^2$$

$$2a(-6a^2 + 6c)$$
$$-12a^3 + 12ac$$

$$-4k(-5 - k)$$
$$4k^2 + 20k$$

$$3r(6 + 6r^2)$$
$$18r^3 + 18r$$

$$-d(-3d + 4)$$
$$3d^2 - 4d$$

$$-2g(2g^2 + 4g)$$
$$-4g^3 - 8g^2$$

$$3x^2(5 - 2x)$$
$$-6x^3 + 15x^2$$

$$2h(6h + 5)$$
$$12h^2 + 10h$$

$$6e(5v - 5e)$$
$$30e^2 + 30ev$$

$$4b(-3b + 9b)$$
$$24b^2$$

$$5(3q + 5q)$$
$$40q$$

$$2n(3n^2 + 5)$$
$$6n^3 + 10n$$

$$-3m^2(-1 + m)$$
$$-3m^3 + 3m^2$$

$$2r(2r^4 + 5)$$
$$4r^5 + 10r$$

$$8v(-2v^2 + 4f)$$
$$-16v^3 + 32fv$$