

## Unit 3 Quiz Review

Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify each expression.**

1)  $(2m^2n^2 + 13m^3) - (4m^3 + 7m^4n^4 - 6n^2) - (11n^2 + 10m^4n^4)$

2)  $(4x^2y^4 + 5y^4) - (-11y^4 + 14x^4 - 10x^2y^4) - (-10x^2y^3 + 13x^2y^4)$

3)  $(14xy + 8x^2y) - (-4xy + 14y^3 + 12x^2) + (-14xy - 14x^2)$

4)  $(-9x^3y^3 - x^3y^2) - (-x^3y^3 - 9x^4 + 13x^3y^2) - (-10x^4 - 8x)$

**Find each product.**

5)  $(6p - 5)(-2p - 5)$

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

7)  $(2x - 8)(-7x - 3)$

8)  $(-5p - 1)(-7p + 8)$

9)  $(6x + 1)(x^2 + 3x - 4)$

10)  $(4n + 5)(3n^2 + n + 1)$

11)  $(5x + 2)(3x^2 + 5x + 8)$

12)  $(8x + 2)(8x^2 - 2x + 7)$

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**Simplify each expression.**

$$1) (2m^2n^2 + 13m^3) - (4m^3 + 7m^4n^4 - 6n^2) - (11n^2 + 10m^4n^4)$$

$$-17m^4n^4 + 2m^2n^2 + 9m^3 - 5n^2$$

$$2) (4x^2y^4 + 5y^4) - (-11y^4 + 14x^4 - 10x^2y^4) - (-10x^2y^3 + 13x^2y^4)$$

$$x^2y^4 + 10x^2y^3 - 14x^4 + 16y^4$$

$$3) (14xy + 8x^2y) - (-4xy + 14y^3 + 12x^2) + (-14xy - 14x^2)$$

$$8x^2y - 14y^3 + 4xy - 26x^2$$

$$4) (-9x^3y^3 - x^3y^2) - (-x^3y^3 - 9x^4 + 13x^3y^2) - (-10x^4 - 8x)$$

$$-8x^3y^3 - 14x^3y^2 + 19x^4 + 8x$$

**Find each product.**

$$5) (6p - 5)(-2p - 5)$$

$$-12p^2 - 20p + 25$$

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

$$-12r^2 - 22r - 6$$

$$7) (2x - 8)(-7x - 3)$$

$$-14x^2 + 50x + 24$$

$$8) (-5p - 1)(-7p + 8)$$

$$35p^2 - 33p - 8$$

$$9) (6x + 1)(x^2 + 3x - 4)$$

$$6x^3 + 19x^2 - 21x - 4$$

$$10) (4n + 5)(3n^2 + n + 1)$$

$$12n^3 + 19n^2 + 9n + 5$$

$$11) (5x + 2)(3x^2 + 5x + 8)$$

$$15x^3 + 31x^2 + 50x + 16$$

$$12) (8x + 2)(8x^2 - 2x + 7)$$

$$64x^3 + 52x + 14$$