

Math 2 Unit 2.1 & 2.2 Quiz Practice

Period _____

Simplify each expression.

1) $(7x^3 + 5x^2) - (7x^3 - 5x^2)$

2) $(5k^3 + 2 - 6k^2) + (7k^3 + 2k^4 + 3k) - (8k^4 - 6k^3 + 1)$

Find each product.

3) $3x^3(4x^2 - 3x - 5)$

4) $\frac{27}{8} \left(\frac{3}{8}n + \frac{17}{5} \right)$

5) $(8x + 2y)(8x + 6y)$

6) $(7p^2 + 7p - 8)(7p^2 + 4p - 2)$

Factor the common factor out of each expression.

7) $6y^2 - 48yx$

8) $16m^{10} - 36m^2 + 28m$

9) $-72n^5p^3 + 36n^3p^2 - 9n^6m^2$

10) $32x^2y^7z^4 - 64x^3y^3z^3 + 72x^2y^2z^5 + 56xy^2z^3$

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Period _____

Simplify each expression.

1) $(7x^3 + 5x^2) - (7x^3 - 5x^2)$

$10x^2$

2) $(5k^3 + 2 - 6k^2) + (7k^3 + 2k^4 + 3k) - (8k^4 - 6k^3 + 1)$

$-6k^4 + 18k^3 - 6k^2 + 3k + 1$

Find each product.

3) $3x^3(4x^2 - 3x - 5)$

$12x^5 - 9x^4 - 15x^3$

4) $\frac{27}{8}\left(\frac{3}{8}n + \frac{17}{5}\right)$

$\frac{81}{64}n + \frac{459}{40}$

5) $(8x + 2y)(8x + 6y)$

$64x^2 + 64xy + 12y^2$

6) $(7p^2 + 7p - 8)(7p^2 + 4p - 2)$

$49p^4 + 77p^3 - 42p^2 - 46p + 16$

Factor the common factor out of each expression.

$$7) 6y^2 - 48yx$$
$$6y(y - 8x)$$

$$8) 16m^{10} - 36m^2 + 28m$$
$$4m(4m^9 - 9m + 7)$$

$$9) -72n^5p^3 + 36n^3p^2 - 9n^6m^2$$
$$9n^3(-8n^2p^3 + 4p^2 - m^2n^3)$$

$$10) 32x^2y^7z^4 - 64x^3y^3z^3 + 72x^2y^2z^5 + 56xy^2z^3$$
$$8xy^2z^3(4xy^5z - 8x^2y + 9xz^2 + 7)$$