Math 2   Name_____

Math 2 Unit 2 Test PRACTICE   Period____

Simplify each expression.

1) $(4a - 6) - (5a - 8)$

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

Find each product.

3) $8a^2(2a^2 - 6a + 5)$

4) $\dfrac{6}{5}\left(\dfrac{9}{8}k + \dfrac{6}{5}\right)$

5) $(7x + 7y)(7x - 5y)$

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

Solve each equation by factoring. Show all work for credit.

7) $x^2 + 6x + 8 = 0$

8) $6x^2 - 6x - 12 = 0$

9) $x^2 - 3x - 9 = -5$

10) $8a^2 = -128 - 64a$

11) $4n^2 + 7n - 168 = 3n$

12) $16n^2 + 44n + 28 = 0$

13) $2k^2 + 3k - 13 = -8$

14) $7x^2 = -8x$

15) $48a^2 + 7a - 17 = -a^2 + 3$

16) $12k^2 + 78k + 115 = -5$

Math 2 Unit 2 Test PRACTICE

Simplify each expression.

1) $(4a - 6) - (5a - 8)$

$-a + 2$

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

$r^4 - 15r^3 - 1$

Find each product.

3) $8a^2(2a^2 - 6a + 5)$

$16a^4 - 48a^3 + 40a^2$

4) $\dfrac{6}{5}\left(\dfrac{9}{8}k + \dfrac{6}{5}\right)$

$\dfrac{27}{20}k + \dfrac{36}{25}$

5) $(7x + 7y)(7x - 5y)$

$49x^2 + 14xy - 35y^2$

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

$20k^4 + 51k^3 + 2k^2 - 36k + 8$

Solve each equation by factoring. Show all work for credit.

7) $x^2 + 6x + 8 = 0$

$\{-4, -2\}$

8) $6x^2 - 6x - 12 = 0$

$\{-1, 2\}$

9) $x^2 - 3x - 9 = -5$

$\{4, -1\}$

10) $8a^2 = -128 - 64a$

$\{-4\}$

11) $4n^2 + 7n - 168 = 3n$

$\{6, -7\}$

12) $16n^2 + 44n + 28 = 0$

$\left\{-\dfrac{7}{4}, -1\right\}$

13) $2k^2 + 3k - 13 = -8$

$\left\{-\dfrac{5}{2}, 1\right\}$

14) $7x^2 = -8x$

$\left\{-\dfrac{8}{7}, 0\right\}$

15) $48a^2 + 7a - 17 = -a^2 + 3$

$\left\{-\dfrac{5}{7}, \dfrac{4}{7}\right\}$

16) $12k^2 + 78k + 115 = -5$

$\left\{-\dfrac{5}{2}, -4\right\}$