Math Plus Honors

Name_____

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Polynomials & Factoring Quiz Review

Date_____

Factor each completely.

1) $5b^3 + 30b^2 + 3b + 18$

$(5b^2 + 3)(b + 6)$

2) $8mn - 12m^5 - 10rn + 15rm^4$

$(4m - 5r)(2n - 3m^4)$

3) $3x^2 + 45x + 150$

$3(x + 10)(x + 5)$

4) $2r^3 - 4r^2$

$2r^2(r - 2)$

5) $2n^2 + 10n - 12$

$2(n - 1)(n + 6)$

6) $2a^3 - 11a^2 - 90a$

$a(2a + 9)(a - 10)$

7) $5k^2 - 7k - 6$

$(5k + 3)(k - 2)$

8) $x^2 - 3xy + 2y^2$

$(x - y)(x - 2y)$

Find each product.

9) $(2x - 3)(5x^2 + 7x + 5)$

$10x^3 - x^2 - 11x - 15$

Divide.

10) $(40p^6 + 32p^5 + 8p^4) \div 8p^3$

$5p^3 + 4p^2 + p$

Simplify each expression.

11) $(8x^3y^2 + x^4y^4 - 2xy^4) + (6xy^4 + 7x^4y^4 - 2x^3y^2)$

$8x^4y^4 + 6x^3y^2 + 4xy^4$

Factor each completely.

12) $n^2 - n - 10$

Not factorable

13) $9r^3 - 78r^2 + 144r$

$3r(3r - 8)(r - 6)$

Name each polynomial by degree and number of terms.

14) $-5b^3$

cubic monomial

15) $-9k^4 - 7k^3 - 5k + 10$

quartic polynomial with four terms

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