

Review (Sections R.2, R.3, 1.1, 1.2, 1.7, 1.8)

Name: key Date: _____ Period: _____

Chapter R: Review of Basic Concepts

Solve the equation by factoring.

1). $x^2 + 5x = 0$

$$x(x+5) = 0$$

$$x = 0, -5$$

2). $x^2 - 6x - 27 = 0$

$$(x-9)(x+3) = 0$$

$$x = 9, -3$$

3). $x^2 + 5x = 24$

$$x^2 + 5x - 24 = 0$$

$$(x+8)(x-3) = 0$$

$$x = 3, -8$$

4). $x^2 + 12x - 45 = 0$

$$(x+15)(x-3) = 0$$

$$x = 3, -15$$

5). $9x^2 - 25 = 0$

$$(3x-5)(3x+5) = 0$$

$$x = 5/3, -5/3$$

6). $3x^2 - 12x - 36 = 0$

$$3(x^2 - 4x - 12) = 0$$

$$(x-6)(x+2) = 0$$

$$x = 6, -2$$

Multiply Polynomials

1). $-2x(3x^2 - 4x)$

$$-6x^3 + 8x^2$$

2). $(x+2)(x+6)$

$$x^2 + 8x + 12$$

3). $(3x-2)(4x+3)$

$$12x^2 + x - 6$$

4). $(2x+1)^2$

$$(2x+1)(2x+1)$$

$$4x^2 + 4x + 1$$

Honors Algebra 2 with Trig
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$$5). \quad (3p^2 - 4p + 1)(p^3 + 2p - 8)$$

$$= 3p^5 + 6p^3 - 24p^2 - 4p^4 - 8p^2 + 32p$$

$$+ p^3 + 2p - 8$$

$$= 3p^5 - 4p^4 + 7p^3 - 32p^2 + 34p - 8$$

$$6). \quad (x+y)^3$$

$$= (x+y)(x+y)(x+y)$$

$$= (x^2 + 2xy + y^2)(x+y)$$

$$= x^3 + 2x^2y + xy^2 + x^2y + 2xy^2 + y^3$$

$$= x^3 + 3x^2y + 3xy^2 + y^3$$

Using the Exponent Rules

$$1). \quad (6z^5)(9z^3)(2z^2)$$

$$108z^{10}$$

$$2). \quad (3^4x^2)^3$$

$$3^{12}x^6$$

$$3). \quad \left(\frac{-2m^6}{t^2}\right)^5$$

$$= \frac{(-2)^5 m^{30}}{t^{10} z^5}$$

$$= \frac{-2^5 m^{30}}{t^{10} z^5}$$

$$4). \quad -(-4)^0$$

$$= -(1)$$

$$= -1$$

Add or subtract as indicated.

$$1). \quad (2y^4 - 3y^2 + y) + (4y^4 + 7y^2 + 6y)$$

$$6y^4 + 4y^2 + 7y$$

$$2). \quad (-3m^3 - 8m^2 + 4) - (m^3 + 7m^2 - 3)$$

$$-3m^3 - 8m^2 + 4 - m^3 - 7m^2 + 3$$

$$-4m^3 - 15m^2 + 7$$