

Name _____

Date _____

Advanced Algebra

Unit 4: Quadratics- Disguised Quadratics Assignment #2

<p>1) Expand: $(x+3)(x-2) = x^2+1x-6$</p> <p>2) Factorize $3x^2-11x-4 = (3x+1)(x-4)$</p> <p>3) Substitute coordinates $y=2x^2+4x+c$, find the value of c at the point (1,3) $3=2(1)^2+4(1) + c$ so $c=-3$</p>	<p>Expand: a) $(2x+3)(x-4)$</p> <p>b) $(7x-5)(2x+3)$</p> <p>Factorize a) $2x^2+5x+2$</p> <p>b) $5x^2+13x-6$</p> <p>Substitute: a) If $y=2x^2-3x+c$ find the value of c at the point (2,-1)</p> <p>b) If $y=5x^2+x-c$ find the value of c at the point (1-5)</p>
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Expand the following:

1) $(3x-4)(2x+4)$

$$6x^2 + 4x - 16$$

2) $(7x-2)(3x+4)$

$$21x^2 + 22x - 8$$

3) $(2x^2-2)(2x^2+2)$

$$4x^4 - 4$$

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

$$6x^{12} + 8x^6 - 8$$

Factorize:

1) $3x^2+10x-8$

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

2) $5x^2+17x+6$

$$(5x+2)(x+3)$$

3) $2x^2-8x-24$

$$(2x+4)(x-6)$$

4) $11x^2-47x+12$

$$(11x-3)(x-4)$$

Solve each of the following equations for x:

1) $x^4 + 15x^2 + 36 = 0$

$$(x^2 + 12)(x^2 + 3) = 0$$

NO Real Roots

2) $x^4 - 6x^2 - 16 = 0$

$$(x^2 - 8)(x^2 + 2) = 0$$

$$x = \pm\sqrt{8} \quad \text{NO Real}$$

3) $x^6 + 6x^3 - 16 = 0$

$$(x^3 - 2)(x^3 + 8)$$

$$x = 1.26 \quad x = -2$$

4) $x^6 + 25x^3 - 50 = 0$

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Does NOT FACTOR

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5) $x - 4\sqrt{x} - 32 = 0$

$$(x^{\frac{1}{2}} - 8)(x^{\frac{1}{2}} + 4)$$

$$x = 64$$

Substitute the given point in to find the value of c.

7) $y = x^4 + 11x^2 + c$

Point: (2,90)

$$90 = 16 + 44 + c$$

$$30 = c$$

$$y = x^4 + 11x^2 + 30$$

8) $y = x - 5\sqrt{x} + c$

Point: (4,-20)

$$-20 = 4 - 5\sqrt{4} + c$$

$$-20 = -6 + c$$

$$-14 = c$$

$$y = x - 5\sqrt{x} - 14$$

9) $y = x^3 - c - x^4$

Point (2,210)

$$210 = 256 - 16 - c$$

$$210 = 240 - c$$

$$-30 = -c$$

$$30 = c$$

$$y = x^3 - x^4 - 30$$

10) $y = x^6 + c + 16x^3$

Point (3,1209)

$$1209 = 729 + 16(3)^3 + c$$

$$48 = c$$

$$y = x^6 + 16x^3 + 48$$

11) $y = -8\sqrt{x} + c + x$

Point (4,3)

12) $y = 65x^4 - c - 4x^8$

Point (-1,45)