

Practice P.3 & P.4 Quiz

Multiply the following

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

$$4x^2 - 6x - 6x + 9$$

$$4x^2 - 12x + 9$$

$$2. (4x-5)(3x+8)$$

$$12x^2 - 15x + 32x - 40$$

$$12x^2 + 17x - 40$$

$$3. (3x+2)^3 \quad 1 \ 3 \ 3 \ 1$$

$$1(3x)^3 2^0 + 3(3x)^2 2^1 + 3(3x) 2^2 + 2^3$$

$$= 27x^3 + 54x^2 + 36x + 8$$

4. Simplify $-5(2w - 2x) - 2(w - 5x)$

$$-10w + 10x - 2w + 10x$$

$$= -12w + 20x$$

Factor the following completely

$$5. x^2 + 8x - 20$$

$$(x+10)(x-2)$$

$$6. 3x^2 + 10x + 8 \quad a \cdot c = 24$$

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

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

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

$$7. 6x^2 - 54$$

$$6(x^2 - 9)$$

$$6(x-3)(x+3)$$

8. $40x^3 + 8x^2 + 25x + 5$

$$8x^2(5x+1) + 5(5x+1)$$

$$(8x^2+5)(5x+1)$$

9. $81 - x^2$

$$(9-x)(9+x)$$

8. Put $12 + 3x^2 - 9x^7$ into standard form and identify the leading coefficient and degree of the polynomial.

$$-9x^7 + 3x^2 + 12 \quad D: 7$$

$$LC: -9$$

9. Multiply $(3x^2 + 2x + 1)(4x^2 - 5x - 3)$

$$12x^4 - 15x^3 - 9x^2 + 8x^3 - 10x^2 - 6x + 4x^2 - 5x - 3$$

$$= 12x^4 - 7x^3 - 15x^2 - 11x - 3$$