

Section 3.7 and 3.8

Worksheet #4

1. Find the products.

a) $(2x+1)(3x^2+x+4)$

$$6x^3 + 5x^2 + 9x + 4$$

d) $(4x-1)(5x+2y-3)$

$$20x^2 + 8xy - 17x - 2y + 3$$

b) $(2x+y-1)(3x+2)$

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

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

$$x^3 + 5x^2 + 7x + 3$$

c) $(x+5)(x-5)(x^2+5x-2)$

$$x^4 + 5x^3 - 27x^2 - 125x + 50$$

f) $(x+6y-4)^2$

$$x^2 + 12xy - 8x + 36y^2 - 48y + 16$$

2. Factor completely.

a) $x^2 - 144$

$$(x + 12)(x - 12)$$

b) $4x^2 - 9$

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

c) $100x^2 - 1$

$$(10x + 1)(10x - 1)$$

d) $81 - x^2$

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

e) $7x^2 - 28$

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

f) $25x^2 - 16y^2$

$$(5x + 4y)(5x - 4y)$$

g) $8x^2 - 18$

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

h) $100x^2 - 4$

$$4(5x + 1)(5x - 1)$$

i) $4x^2 - 36$

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

j) $121 - x^2$

$$(11 - x)(11 + x)$$