

Pg. 578: 21-25 (o), 28-34 (e), 37, 39,
41-47 (a), 48, 50, 52, 54.

(21) $-8v^2 - 20x$
(23) $2x^3 - 16x^2 + 2x$
(25) $12w^5 - 8w^4 - 4w^3$
(28) $x^2 + 4x - 12$
(30) $a^2 + 5a - 24$
(32) $4m^2 - 5m - 6$
(34) $6d^2 + 11d + 3$
(37) $y^2 - 3y - 40$

(39) $2w^2 + 5w - 25$
(41) $2x^2 - 3x - 35$
(42) $3a^2 - 28a + 9$
(43) $6z^2 + 25z + 14$
(44) $12a^2 + 29a - 8$
(45) $10t^2 + 9t - 9$
(46) $16x^2 + 8x - 15$
(47) $63w^2 - 143w + 60$
(48) $x^3 + 5x^2 + 11x + 10$
(50) $a^3 - 7a^2 + 6a + 18$
(52) $x^3 + 2x^2 - 5x + 12$
(54) $m^3 - 2m^2 - 17m + 36$

10.3 Special Products of Polynomials

April 19, 2007

Recall

$$(y+3)(y-3)$$

$$y(y) + y(-3) + 3(y) + 3(-3)$$

$$y^2 - 3y + 3y - 9$$

$$y^2 - 9$$

The Middleterms
Inner + Outer,
Become zero

*
Product of Sum + Difference

$$(a-b)(a+b)$$

$$(a+b)(a-b) = a^2 - b^2$$

$$(x+5)^2 = (x+5)(x+5)$$

$x^2 = x \cdot x$

$$x(x) + x(5) + 5(x) + 5(5)$$

$$x^2 + 5x + 5x + 25$$

$$\underline{\underline{x^2 + 10x + 25}}$$

~~$x^2 + 25$~~

$$(x-7)^2 = (x-7)(x-7)$$

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

$$x^2 - 7x - 7x + 49$$

$$\underline{\underline{x^2 - 14x + 49}}$$

Square of a Binomial

$$(a+b)^2 = a^2 + 2ab + b^2$$

w/ Addition

$$(a-b)^2 = a^2 - 2ab + b^2$$

w/ Subtraction

ex1

$$(5t-2)(5t+2)$$

Product of
the Sum &
Diff

$$5t(5t) + 5t(2) - 2(5t) - 2(2)$$

$$25t^2 + 10t - 10t - 4$$

$$\underline{\underline{25t^2 - 4}}$$

OR

$$(5t)^2 - (2)^2$$

$$\underline{\underline{25t^2 - 4}}$$

$$\text{or } a^2 - b^2$$

ex2)

$$(3n+4)^2$$

$$(3n)^2 + 2(3n)(4) + (4)^2$$

$$\underline{\underline{9n^2 + 24n + 16}}$$

$a^2 + 2ab + b^2$
Square of a
Binomial
w/ Add

ex3)

$$(2x - 7y)^2$$

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

$$\underline{\underline{4x^2 - 28xy + 49y^2}}$$

$a^2 - 2ab + b^2$

Square of
a Binomial
w/ Subt

O.T.L.

① pg 585: 13-22 (a)
24-46 (e)

② Quiz on Tomorrow