6.3 even

(2) $(x+8)(x+2) = x^2+2x+8x+16$

$= \boxed{x^2+10x+16}$

(4) $(y-3)(y+4) = y^2+4y-3y-12$

$= \boxed{y^2+y-12}$

(6) $(3x-5)(x+7) = 3x^2+21x-5x-35$

$= \boxed{3x^2+16x-35}$

(8) $(5y+4)(y-2) = 5y^2-10y+4y-8$

$= \boxed{5y^2-6y-8}$

(10) $(2x-5)(7x+2) = 14x^2+4x-35x-10$

$= \boxed{14x^2-31x-10}$

(12) $(4y-5)(7y-4) = 28y^2-16y-35y+20$

$= \boxed{28y^2-51y+20}$

6.3 even

(14) $(2+5x)(1-4x) = 2-8x+5x-20x^2$

$= 2-3x-20x^2$

$= \boxed{-20x^2-3x+2}$

(16) $(7-2y)(10-3y) = 70-21y-20y+6y^2$

$= 70-41y+6y^2$

$= \boxed{6y^2-41y+70}$

(17) $(5x^2-4)(3x^2-7) =$

$= 15x^4-35x^2-12x^2+28$

$= \boxed{15x^4-47x^2+28}$

(18) $(7x^2-2)(3x^2-5)$

$= 21x^4-35x^2-6x^2+10$

$= \boxed{21x^4-41x^2+10}$

(20) $(4x-3)(2-x)$

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

$= \boxed{-4x^2+11x-6}$

6.3 even p 361

(22) $(x+4)(x^2+5)$

$= x^3 + 5x + 4x^2 + 20$

$= \boxed{x^3 + 4x^2 + 5x + 20}$

(24) $(7x^3+5)(x^2+2)$

$= \boxed{7x^5 + 14x^3 + 5x^2 + 10}$

(26) $(y+5)(y-5)$

$= yy - 5y + 5y - 5 \cdot 5$

$= yy - 5 \cdot 5$

$= y^2 - 5^2$

$= y^2 - 25$

(28) $(2x+5)(2x-5)$

$= 4x^2 - 25$

6.3 even pgs

(30) $(5z-2)(5z+2)$

$= \boxed{25z^2 - 4}$

(32) $(4+5)(4-5)$

$= 16 - 5^2$

or

$-5^2 + 16$

(34) $(4-3y)(4+3y)$

$= 16 - 9y^2$

(36) $\left(3y + \frac{1}{3}\right)\left(3y - \frac{1}{3}\right)$

$= \boxed{9y^2 - \frac{1}{9}}$

since $\left(3y+\frac{1}{3}\right)\left(3y-\frac{1}{3}\right)$

$= 3y(3y) + 3y\left(-\frac{1}{3}\right) + \frac{1}{3}(3y) + \frac{1}{3}\left(-\frac{1}{3}\right)$

$= 9y^2 - y + y - \frac{1}{9}$

$= 9y^2 - \frac{1}{9}$

(38) $(y^2+2)(y^2-2)$

$= y^4 - 2y^2 + 2y^2 - 4$

$\boxed{= y^4 - 4}$

6.5 even p 265

(40) $(m^3+4)(m^3-4)$

$= \boxed{m^6-16}$

(42) $(2-5^5)(2+5^5)$

$= \boxed{4-5^{10}}$

(44) $(x^{12}+3)(x^{12}-3)$

$= \boxed{x^{24}-9}$

(46) $(x+2)^2$

$= x^2+4x+4$

since $(x+4)^2$
$= (x+4)(x+4)$
$= x^2+2x+2x+4$
$= x^2+8x+4$

(48) $(5x+2)^2$

$= \boxed{25x^2+10x+4}$

(50) $(x-6)^2 = \boxed{x^2-12x+36}$

(52) $(4y-3)^2$

$= \boxed{16y^2-24y+9}$

(54) $(5x^2-3)^2$

$= \boxed{25x^4-30x^2+9}$

(56) $(9-5x)^2$

$= \boxed{81-90x+25x^2}$

(58) $\left(3x+\frac{1}{3}\right)^2$

$= \boxed{9x^2-2x+\frac{1}{9}}$

since
$\left(3x+\frac{1}{3}\right)^2$
$= \left(3x+\frac{1}{3}\right)\left(3x+\frac{1}{3}\right)$
$= 9x^2+3x\left(\frac{1}{3}\right)$
$+3x\left(\frac{1}{3}\right)$
$+\frac{1}{3}\left(\frac{1}{3}\right)$
$= 9x^2+x+x$
$+\frac{1}{9}$
$= 9x^2+2x+\frac{1}{9}$

(60) $\left(2y-\frac{1}{2}\right)^2 =$

$= \boxed{\left(4y^2-2y+\frac{1}{4}\right)}$

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

$= \boxed{x^{16}+10x^8+25}$

(64) $(x+1)(x^2-x+1)$

$= x(x^2-x+1)+1(x^2-x+1)$

$= x^3-x^2+x+x^2-x+1$

$= \boxed{x^3+1}$

G.3 even p 365

(66) $(x+1)^2$

$= \boxed{x^2+2x+1}$

(68) $(4y+9)(4y-9)$

$= \boxed{16y^2-81}$

(70) $5x^2(7x^2+x+6)$

$= \boxed{35x^4+5x^3+30x^2}$

(72) $(8y+3)(10y-5)$

$= 80y^2-40y+30y-15$

$\boxed{= 80y^2-10y-15}$

(74) $(x^2+2)^2$

$= \boxed{x^4+4x^2+4}$

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

$= \boxed{x^4+5x^2+6}$

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

$= \boxed{x^4-25}$

(80) $(2-3x^6)^2$

$= 4-6x^6+9x^{12}$

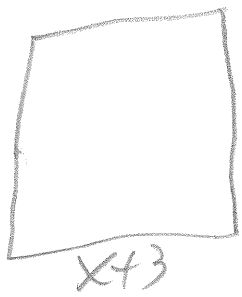
(82) $\left(\frac{1}{4}x^2+16\right)\left(\frac{3}{4}x^2-4\right)$

$= \frac{1}{4}x^2\left(\frac{3}{4}x^2-4\right)+16\left(\frac{3}{4}x^2-4\right)$

$= \frac{3}{16}x^4-x^2+12x^2-64$

$= \boxed{\frac{3}{16}x^4+11x^2-64}$

(84)



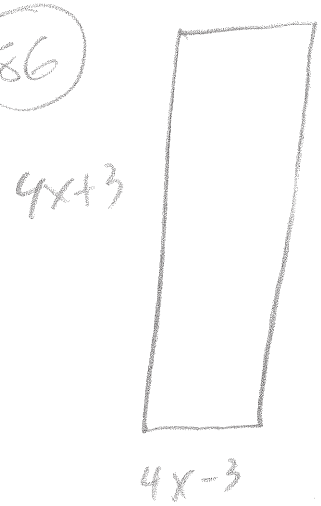
$A = l \cdot w$

$= (x+3)(x+3)$

$= \boxed{x^2+6x+9}$

6.3 even p365 - 366

(86)

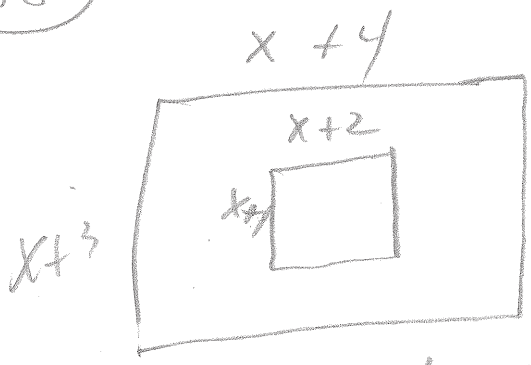


$A = lw$

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

$= \boxed{16x^2 - 9}$

(88)



$A_{Big} - A_{Little} = A_{shaded}$

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

$= x^2 + 7x + 12 - (x^2 + 3x + 2)$

$= x^2 + 7x + 12 - x^2 - 3x - 2$

$= \boxed{4x + 10}$

(90)

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

$= [9x^2 - 4]^2$

$= \boxed{81x^4 - 72x^2 + 16}$

(92) $(9x^2+1)[(3x+1)(3x-1)]$

$= (9x^2+1)[9x^2-1]$

$= \boxed{81x^4 - 1}$