Algebra I

5-4

Multiplying Binomials (FOIL) Mentally

Write each product as a trinomial (Simplify). (pg 201)

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

$x^2 + 8x + 5x + 40$

$x^2 + 13x + 40$

19) $(3h - 5)(2h + 1)$

$6h^2 + 3h - 10h - 5$

$6h^2 - 7h - 5$

29) $(a^2 + 3b)(3a^2 - b)$

$3a^4 - a^2b + 9a^2b - 3b^2$

$3a^4 + 8a^2b - 3b^2$

35) $y(4y + 3)(y - 2)$

$y(4y^2 - 8y + 3y - 6)$

$y(4y^2 - 5y - 6)$

$4y^3 - 5y^2 - 6y$

I like to FOIL first, but you can do the distributive property first if you wish. BUT, you can only distribute into one set of parentheses.

Solve.

39) $(y + 4)(y - 3) = (y - 2)(y + 5)$

$y^2 - 3y + 4y - 12 = y^2 + 5y - 2y - 10$

$y^2 + y - 12 = y^2 + 3y - 10$

$y^2 - y^2 + y - 12 = y^2 - y^2 + 3y - 10$

$y - 12 = 3y - 10$

$y - y - 12 = 3y - y - 10$

$-12 = 2y - 10$

$-12 + 10 = 2y - 10 + 10$

$\frac{-2}{2} = \frac{2y}{2}$

$-1 = y$

$\{-1\}$

Pg 201

2-42 even