Bell Work 2-19

Simplify each expression.

1) $(3m)(7m) = 21m^2$

2) $(2x)(5x) = 10x^2$

3) $7x + 3x = 10x$

4) $-6x - 9x = -15x$

5) $-4x + 2x \quad -2x$

3 methods can be used to multiply binomials

1. Distributive Property
2. Using a Table
3. FOIL

Distributive Property

1) $(c-10)(c-5)$

$c(c-5)-10(c-5)$

$c^2 \underline{-5c-10c} +50$

$c^2-15c+50$

(2) $(2x+7)(3x-4)$

$2x(3x-4)+7(3x-4)$

$6x^2 \underline{-8x+21x} -28$

$6x^2+13x-28$

Your turn

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

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

$2x^2 + 2x - 3x - 3$

$2x^2 - x - 3$

Using a Table

4) $(x-2)(x+6)$

	x	-2
x	x^2	$-2x$
6	$6x$	-12

Add

$x^2+4x-12$

(5) $(3p+4)(2p+5)$

	$3p$	4
$2p$	$6p^2$	$8p$
5	$15p$	20

$6p^2+23p+20$

Your turn

6) $(x-8)(3x+1)$

	x	-8
$3x$	$3x^2$	$-24x$
1	x	-8

$3x^2-23x-8$

Multiplying Binomials 2-20

FOIL $(a+b)(c+d)$

First a and c $ac + ad + bc + bd$

Outside a and d

Inside b and c

Last b and d

7) $(a+8)(a-2)$

$a(a)+a(-2)+8(a)+8(-2)$

$a^2 \underbrace{-2a+8a}-16$

$a^2+6a-16$

(8) $(5m-2)(m+3)$

$5m(m)+5m(3)-2(m)-2(3)$

$5m^2 \underbrace{+15m-2m}-6$

$5m^2+13m-6$

Your turn

9) $(4w+13)(w+2)$

$4w(w)+4w(2)+13(w)+13(2)$

$4w^2 \underbrace{+8w+13w} +26$

$4w^2+21w+26$

T. O. D.

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