# Warm Up

Expand

1) $2^3$ = (2)(2)(2)

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

3) $(\ \ )^4$ = (☺)(☺)(☺)(☺)

**18.** Expand and simplify.

a) $(x-2)^3$

$(x-2)(x-2)(x-2)$

$x^2 - 2x - 2x + 4$

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

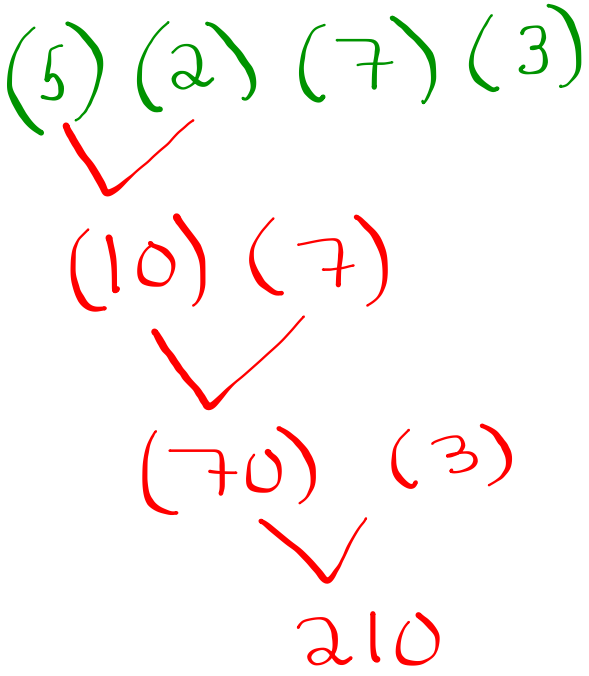
$(x-2)(x^2 - 4x + 4)$

3.7 Multiplying Polynomials

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

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

$$x^3 - 6x^2 + 12x - 8$$


(5) (2) (7) (3)
(10) (7)
(70) (3)
210

18. Expand and simplify.

a) $(x-2)^3$

$= (x-2)(x-2)(x-2)$

$= x^2 - 2x - 2x + 4$

$= (x^2 - 4x + 4)(x-2)$

$= (x-2)(x^2 - 4x + 4)$

3.7 Multiplying Polynomials

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

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

$x^3 - 6x^2 + 12x - 8$

b) $(2y + 5)^3$

$(8y^3 + 60y^2 + 150y + 125)$

b) $(2y + 5)^3$

$(8y^3 + 60y^2 + 150y + 125)$

$(2y + 5)(2y + 5)(2y + 5)$

$4y^2 + 10y + 10y + 25$

$(4y^2 + 20y + 25)(2y + 5)$

$8y^3 + 40y^2 + 50y + 20y^2 + 100y + 125$

$8y^3 + 60y^2 + 150y + 125$

**19.** Expand and simplify.

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

b) $-3r(r-1)(2r+1)$

c) $5x^2(2x-1)(4x-3)$

d) $-xy(2x+5)(4x-5)$

3.7 Multiplying Polynomials

b) $-3r(r-1)(2r+1)$

$(-3r^2+3r)(2r+1)$

$-6r^3-3r^2+6r^2+3r$

$-6r^3+3r^2+3r$


Numbers, Relations & Functions 10 Name_____

## Mutilpying Polynomials

Date_____

**Find each product.**

1) $5(6b+3)$

2) $8(6r+3)$

3) $2(8x+y)$

4) $5mn(3m+2n)$

5) $7(x-7y)$

6) $2mn(8m-2n)$

7) $(4x-2y)(6x+6y)$

8) $(6x+3y)(4x-7y)$

9) $(2x+5y)(7x-8y)$

10) $(3x+6y)(5x-8y)$

11) $(5x-4y)(5x^2-4xy+6y^2)$

12) $(8x-7y)(6x^2+8xy+3y^2)$

13) $(6a^2-2a-3)(8a+2)$

14) $(2k^2+8k-2)(7k+4)$

15) $(7a^2-2ab+2b^2)(a^2-2ab-8b^2)$

16) $(x^2-4xy+2y^2)(x^2-2xy-7y^2)$