

### Multiplying a monomial by a monomial

Product	Expanded Form	Single Power
a) $(3^2)(3^4)$		
b) $(5^3)(5^4)$		
c) $(7^2)(7^4)(7^3)$		
d) $(x^3)(x^4)$		
e) $(x^2)(x^7)(x)$		

**PRODUCT RULE:** When multiplying powers with the same base . . .

Add the exponents  
(base stays the SAME!!)

$$(x^a)(x^b) = x^{a+b}$$

Ex. 1) Expand

a)  $a(a)$

b)  $2m^2(m)$

c)  $2(2x)$

d)  $-2(3x)$

e)  $4y(-2y)$

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

7.5 pg 277 # 1, 3, 4, 6-8

## Product of a Polynomial and a monomial

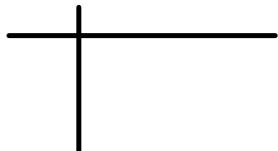
Example 1) Expand the following.

a)  $x(2x)$       b)  $-3x(4x)$       c)  $5x(2x^2)$

Example 2) Expand and simplify.

a)  $2x(2x + 1)$

Chart Method



Distributive property  
method

b)  $3x(5x - 2)$

c)  $-2a(a + 2)$

d)  $-b(4b - 3)$

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

7.6 pg 281 # 3, 4, 7-9  
Remember - Unit test

D1: Mon Oct 26

D2: Tues. Oct 27

**Warm-up****1. Simplify**

a)  $2x - 3xy + 4x + 10xy$       b)  $(x^2 + 3xy + 2) + (2x^2 + 5xy + 1)$

**2. Expand**

a)  $2(3x)$       b)  $-4x(5x)$       c)  $x^2(7x)$

d)  $2(3x - 9)$       e)  $3x(2x - 1)$