

MPM 2DI **5.2 Special Products**

Date: \_\_\_\_\_

**A: Squaring a Binomial**

Ex. 1 Expand and simplify. (look for a pattern)

a)  $(x+3)^2$                       b)  $(x+10)^2$                       c)  $(x-6)^2$                       d)  $(x-4)^2$

e)  $(2x+5)^2$                       f)  $(3x-1)^2$                       g)  $(2x-5y)^2$                       h)  $(4x+7y)^2$

Summary:

Extra practice:  $(7c-2d)^2$ 

$$\begin{array}{ccc} (a+b)^2 & & (a-b)^2 \\ = & & = \end{array}$$

The resulting product is called a:

**B: The Product of a Sum and a Difference**

Ex. 2 Expand and simplify. (look for a pattern)

a)  $(x+3)(x-3)$                       b)  $(y-5)(y+5)$                       c)  $(2x+3)(2x-3)$                       d)  $(3x+5y)(3x-5y)$

- i) Describe the original binomials.
- ii) How can we quickly get the first term of the result?
- iii) How can we quickly get the last term of the result?
- iv) What happened to the middle term?

Summary:

Extra practice:  $(8c+11d)(8c-11d)$ 

$$\begin{array}{ccc} (a+b)(a-b) & & \\ = & & \end{array}$$

The resulting product is called a:

Today's entertainment: pp. 225-227 #3ad, 4ad, 5ad, 6ad, 8( $A = \pi r^2$ ),  
10 (set up a LS and RS chart for 10c), 12, 19d

**Enrichment:** pp. 226-227 #13, 14ab, 16