

20 minute review, then we will  
take our Ch 5 & 6 Test!!

$$\textcircled{9} (a+b)^n$$

$$\textcircled{9} (3m-n)^6$$

$$a = 3m$$

$$b = -n$$

$$n = 6$$

6<sup>th</sup> row:

$$1 \ 6 \ 15 \ 20 \ 15 \ 6 \ 1$$

$$1(3m)^6(-n)^0 + 6(3m)^5(-n)^1 + 15(3m)^4(-n)^2 + 20(3m)^3(-n)^3$$

$$+ \dots$$

$$1a^6b^0 + 6a^5b^1 + 15a^4b^2 + 20a^3b^3 +$$

$$15a^2b^4 + 6a^1b^5 + 1a^0b^6$$

① a)  $0 = x + 2$        $0 = x^2 - 3.5x + 2.5$   
 $x = -2$                        $0 = (x - 1)(x - 2.5)$

$h(x)$ 's zeros:  
 $x = -2, 1, 2.5$

②  $h(x) = (x + 2)(x^2 - 3.5x + 2.5)$   
 $m(x) = (x - 5)(x + 2)(x^2 - 3.5x + 2.5)$

③ b)  $f(x) = (x - 3)(x^2 - 7x - 13) + 25$

③⑤  $8x^3 - 125$   
 $(a - b)^3 = (a - b)(a^2 + ab + b^2)$   
 $a = 2x$        $(2x - 5)((2x)^2 + (2x)(5) + (5)^2)$   
 $b = 5$                $(2x - 5)(4x^2 + 10x + 25)$

④  $(a + b)^3 = (a + b)(a^2 - ab + b^2)$

⑦  $2x^4 - 9x^3 + 11x^2 - 9x + 9 = 0$

$p: \pm \{1, 3, 9\}$

$q: \pm \{1, 2\}$

$\frac{p}{q}: \pm \{1, 3, 9, \frac{1}{2}, \frac{3}{2}, \frac{9}{2}\}$

$(x - 3) \overline{) \begin{array}{r} 2x^4 - 9x^3 + 11x^2 - 9x + 9 \\ 6x^3 - 9x^2 + 6x - 9 \\ \hline 2x^4 - 9x^3 + 11x^2 - 9x + 9 \end{array}}$

$2x^4 - 9x^3 + 11x^2 - 9x + 9 = (x - 3)(2x^3 - 3x^2 + 2x - 3)$

$p: \pm \{1, 3\}$

$q: \pm \{1, 2\}$

$\frac{p}{q}: \pm \{1, 3, \frac{1}{2}, \frac{3}{2}\}$

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

$(x - 3)(2x - 3)(x^2 + 1)$   
 $(x - 3)(2x - 3)(x + i)(x - i)$   
 $x = 3, \frac{3}{2}, i, -i$

$x^2 + 1 = 0$   
 $-1 \quad -1$   
 $\sqrt{x^2} = \sqrt{-1}$   
 $x = \pm i$

# Chapter 5 & 6 Test