

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

⑥  $\frac{f(x)}{x-3} = x^2 - 7x - 13$  R25

a)  $f(3) = 25$

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

$$\begin{array}{r} x^3 - 7x^2 - 13x \\ + \quad -3x^2 + 21x + 39 + 25 \\ \hline \end{array}$$

$f(x) = x^3 - 10x^2 + 8x + 64$

c)  $f(8) = 0$

8	1	-10	8	64
		8	-16	-64
	1	-2	-8	0

d)  $f(8) = 0$

e)  $(x-8)(x^2 - 2x - 8)$

$(x-8)(x-4)(x+2)$

$$\begin{array}{r} \hline x^2 - 2x - 8 \\ x-8 \overline{) x^3 - 10x^2 + 8x + 64} \\ \underline{-(x^3 - 8x^2)} \phantom{+ 64} \\ -2x^2 + 8x + 64 \\ \underline{-(-2x^2 + 16x)} \phantom{+ 64} \\ -8x + 64 \\ \underline{-(-8x + 64)} \\ 0 \end{array} \quad (x-8)(x^2 - 2x - 8)$$

⑨  $(3m-n)^6$

$(a+b)^n$      $a = 3m$   
 $\phantom{(a+b)^n}$      $b = -n$

row 6  
 1 6 15 20 15 6 1

$1a^6b^0 + 6a^5b^1 + 15a^4b^2 + \underline{20a^3b^3} + 15a^2b^4 + 6a^1b^5 + 1a^0b^6$

4th term:  $20(3m)^3(-n)^3$

$20 \cdot 27m^3 \cdot -n^3$

$\boxed{-540m^3n^3}$

# Chapter 5 & 6 Test