

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

7, 8^{1/2}, 2b, 32, 9, 12,

(7) $2x^4 - 9x^3 + 11x^2 - 9x + 9 = 0$

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

$(x-3)$
 $\begin{array}{r|rrrrr} 3 & 2 & -9 & 11 & -9 & 9 \\ & & 6 & -9 & 6 & -9 \\ \hline & 2 & -3 & 2 & -3 & 0 \end{array}$

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

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

$(x+3)$
 $\begin{array}{r|rrrr} -3 & 2 & -3 & 2 & -3 \\ & & -6 & -21 & 75 \\ \hline & 2 & -9 & -25 & 72 \end{array}$
 $(2x-3)$
 $\begin{array}{r|rrrr} \frac{3}{2} & 2 & -3 & 2 & -3 \\ & & 3 & 0 & 3 \\ \hline & 2 & 0 & 2 & 0 \end{array}$
 $(x-3)(2x-3)(2x^2+2) = 0$

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

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

(30) $(x^3 - 2x^2)(3x - 6)$
 $x^2(x-2) \cdot 3(x-2)$
 $(x-2)(x^2+3)$
 $(x-2)(x+i\sqrt{3})(x-i\sqrt{3})$

Chapter 5 & 6 Test