If you need more practice with … here are some things to remember & practice!

Finding Complex Roots

* By Quadratic Formula/Completing the Square (#1 quiz 2.2)

*Remember…*

* $x=\frac{-b\pm \sqrt{b^{2}-4ac}}{2a}$
* Never include x in the quadratic formula on the right side
* $\sqrt{-1}=i$

*Examples: Solve for all values of x in simplest a+bi form.*

1. $9x²+24x=-19$ b) $4x²-8x+7=0$

Factoring by Grouping to Solve Polynomials (#4 quiz 2.2)

*Remember…*

* This occurs when we have **four** terms
* Write in standard form and group into two binomials
* Pull out a GCF from each and write as two *factors* (factors imply multiplication)
* Set each factor equal to zero to solve for all solutions

*Examples:*

1. $x^{5}+4x^{4}-25x³-100x²=0$ b) $2x³-5x^{2}-4x+10=0$
* From Factored Forms (#2 quiz 2.2)

*Remember…*

* Set each factor =0 individually to solve like separate equations

*Examples: Find the zeros of each function.*

1. $H\left(x\right)=-3(x^{2}-49)(x^{2}+4)$ b) $J\left(x\right)=x(7x-3)(x^{2}+81)$

Sketching Curves/Solving Polynomials Graphically

* Given Factored Form of Polynomial (#3 quiz 2.2)

*Remember…*

* Negate factors to determine roots
* Pay attention to which numbers are larger according to the question
* Note details of including all intercepts

*Examples: Sketch the curves given the equations below. Include all intercepts.*

1. $f\left(x\right)=-x²(x-4)(x+3)²$ b) $g\left(x\right)=(2x+2)(x-1)(x+4)²$



* Given a Polynomial in Standard Form (#5 quiz 2.2)

*Remember…*

* Type equation into y= in your calculator
* Use the table to plot **ALL** points in the table that fit in the graph

*Examples: Graph the following functions and state all solutions.*

1. $f\left(x\right)=x³+x²-46x+80$ b) $h\left(x\right)=x^{4}-49x^{2}+36x+252$

