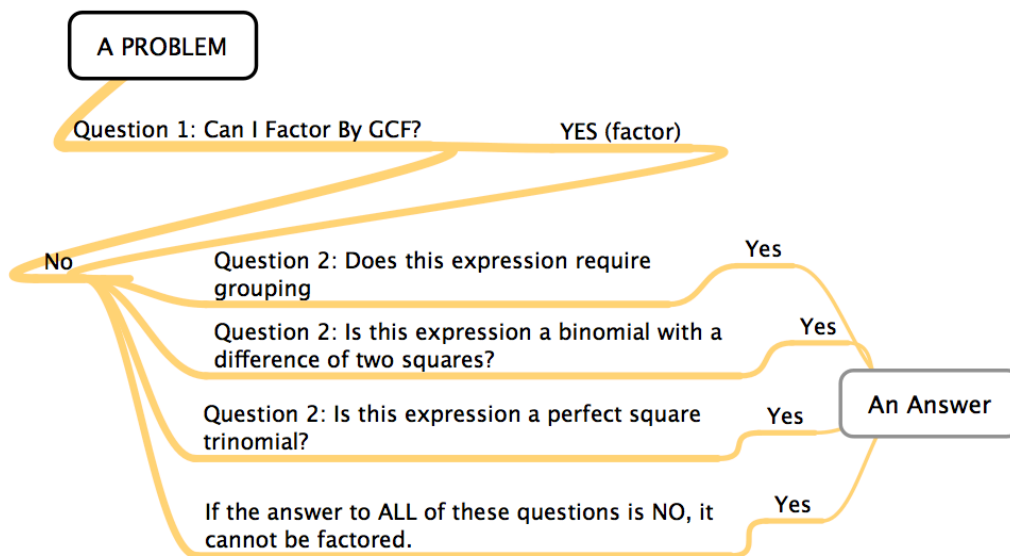


Chapter 8 – Factoring (WITH PROCESS)

Definition of Process: a particular course of action intended to achieve a result



***EXAMPLE For the PROCESS of: $3y^4-243$**

KNOW	DO	CHECK
<ul style="list-style-type: none"> Difference of Two Binomials Check for perfect squares Check for the difference of two squares 	<ul style="list-style-type: none"> Is there a GCF? <i>Yes; $3(y^4-81)$</i> Does the binomial have a difference of 2 squares? <i>Yes</i> $(a-b)(a+b)$ 	<ul style="list-style-type: none"> Redistribute the problem. (since factoring is division multiplying is the inverse). FOIL Check that your GCF was correct Could you factor further?

***Math Examples:**

$$10m^3+4m^2-90m-36$$

$$(10m^3+4m^2)+(-90m-36)$$

$$2m^2(5m+2)+3(30m+12)$$

$$2m^2(5m+2)+6(5m+2)$$

$$(2m^2-6)(5m+2)$$

$$4a^{10}9b^4-121c^816a^6$$

$$(2a^57b^2-11c^44a^3) (2a^57b^2+11c^44a^3)$$

This problem is a complex difference of 2 squares problem.

$$16x^{1000}-128x^{100}$$

$$16x^{100}(x^{10}-8)$$

ACRONYM FOR METHODS OF FACTORING:

What did George bring?
George brought donut pies to Greg's

GCF
Binomial
Difference of Two Squares
Perfect Square
Trinomial
Grouping

***Math Examples:**

$$30x^2+3x-6$$

$$3(10x^2+x-2)$$

$$1+-2=1 \quad 1*-2=-2$$

$$3(5x-2)(2x+1)$$

$$3y^4-243$$

$$3(y^4-81)$$

$$3(y^2-9)(y^2+9)$$

$$3(y-3)(y+3)(y^2+9)$$

$$3k^3(5k^2+19)$$

Cannot be factored further

$$80+80+80+160+80w$$

$$80(1+1+1+2+w)$$

$$80(5+w)$$

$$400*w$$

*Not guaranteed for complete accuracy.