Notes from Day 4

1. HW help

2. Pick Up the Warm Up

only do questions 1 and 3 for now

1. **Factor** the following two expressions. *In case you forgot what factoring means.... It means try to create two or more factors that are multiplied together. The final expression must be equal to the original.*

a) $5n - 30$ $5(n-6)$

b) $8x^4 - 2x^2$ $2x^2(4x^2-1)$

c) $n^2 - 4$ $(n+2)(n-2)$

2. Factor the following quadratic polynomial expression into two binomial factors. *The box/diamond method is one way to do this.*

$12x^2 - 8x - 15$

Notes from Day 4

3. Determine the equation of the straight line that passes through $(-6, 11)$ *and* $(15, -3)$
(Use your reference sheet for a hint if you get stuck)

$-3 = -\frac{2}{3}(15) + b$

$y = \underset{①}{m}x + \underset{②}{b}$

$11 = -\frac{2}{3}\left(\frac{-6}{1}\right)^{2} + b$

$11 = 4 + b$

$-4 \quad -4$

$b = 7$

$y = -\frac{2}{3}x + 7$

DOMAIN — What are the x-values that are needed in a function?

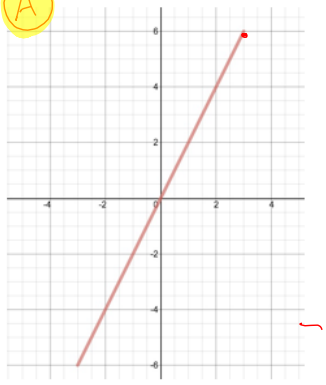
Range — What are the y-values?

Notes from Day 4

Domain and Range

For each of the functions shown, state both the domain and the range.

A



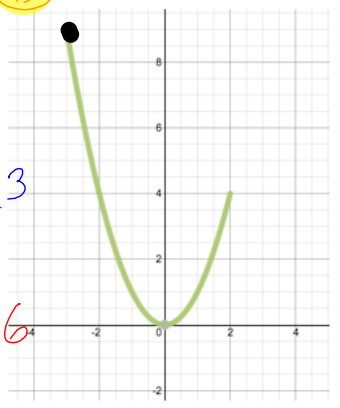
Domain

$-3 \leq x \leq 3$

Range

$-6 \leq y \leq 6$

B



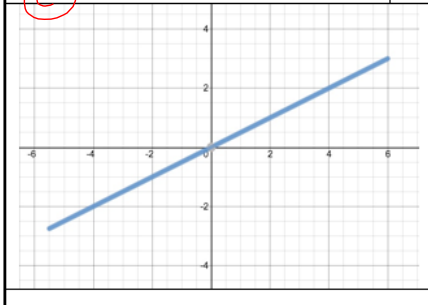
Domain

$-3 \leq x \leq 2$

Range

$0 \leq y \leq 9$

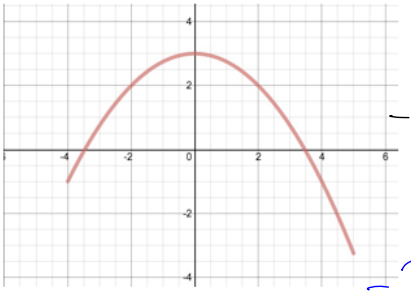
C



Domain

Range

D



Domain

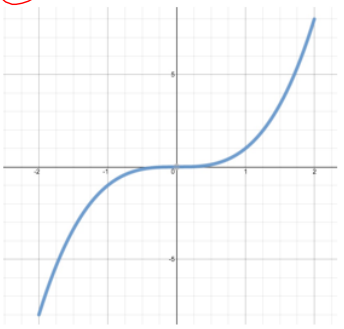
$-4 \leq x \leq 5$

Range

$-3 \leq y \leq 3$

Notes from Day 4

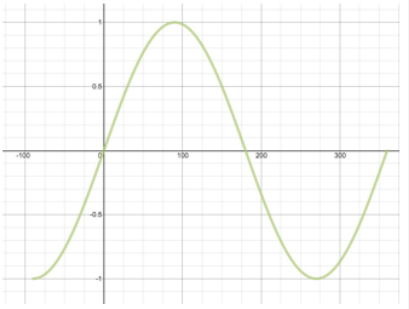
E



Domain

Range

F



Domain

Range

HW Questions ?

Notes from Day 4

(7) $\frac{3(6)x}{2_1} + (6)2x - 1(6) = \frac{2(6)}{13}x$

$3x + 12x - 6 = 4x$

$15x - 6 = 4x$

$-4x \quad -4x$

$11x - 6 = 0$

$X = \frac{6}{11}$ $\qquad$ $\frac{11x}{11} = \frac{6}{11}$

(10) $12x^2 - 8x + 20$

Factor out what is common

$4(3x^2 - 2x + 5)$

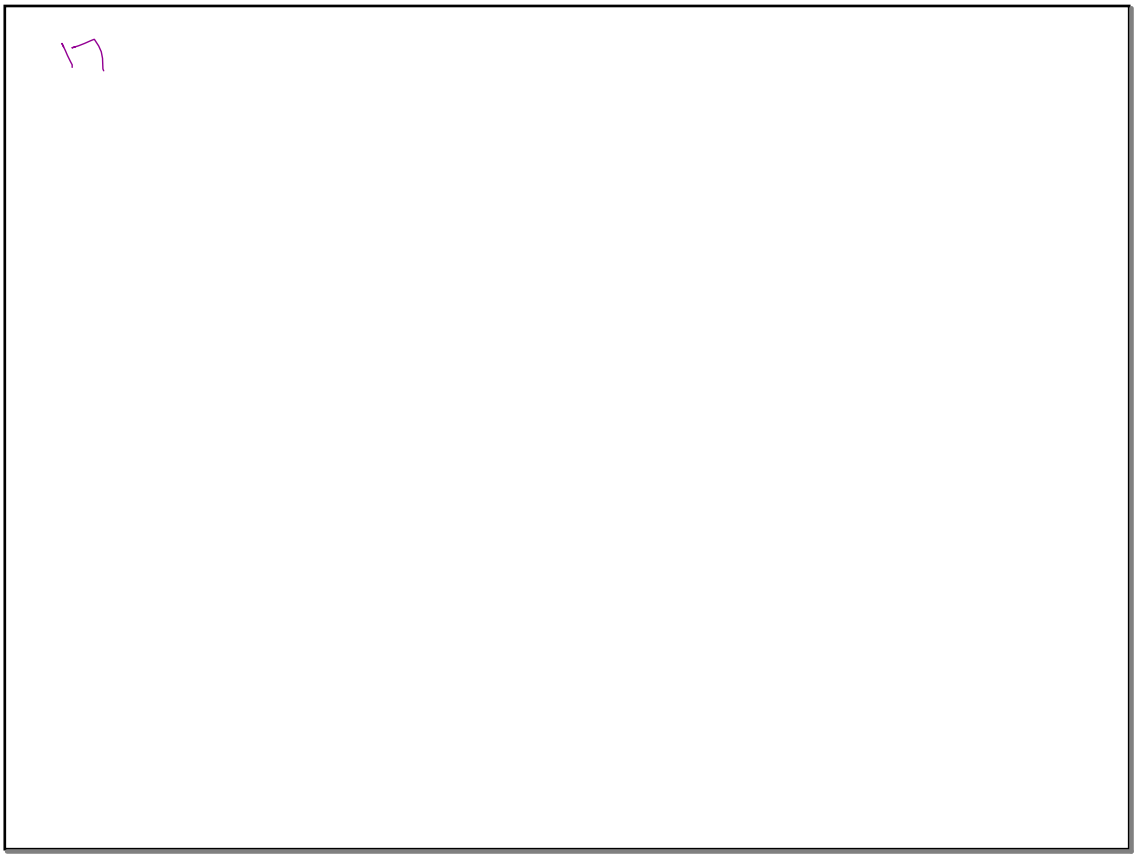
Notes from Day 4

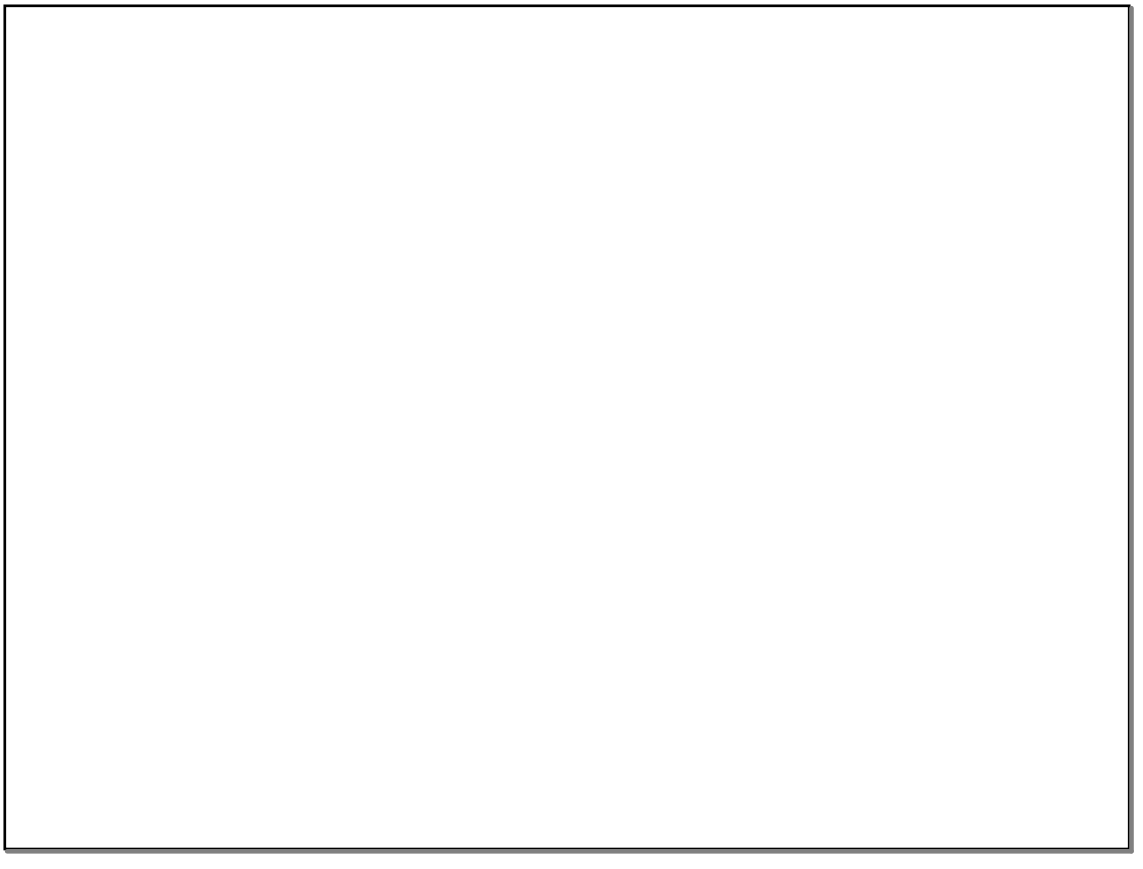
$9k^2 - 1$

$(3k+1)(3k-1)$

16

Notes from Day 4



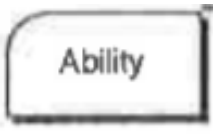


Notes from Day 4

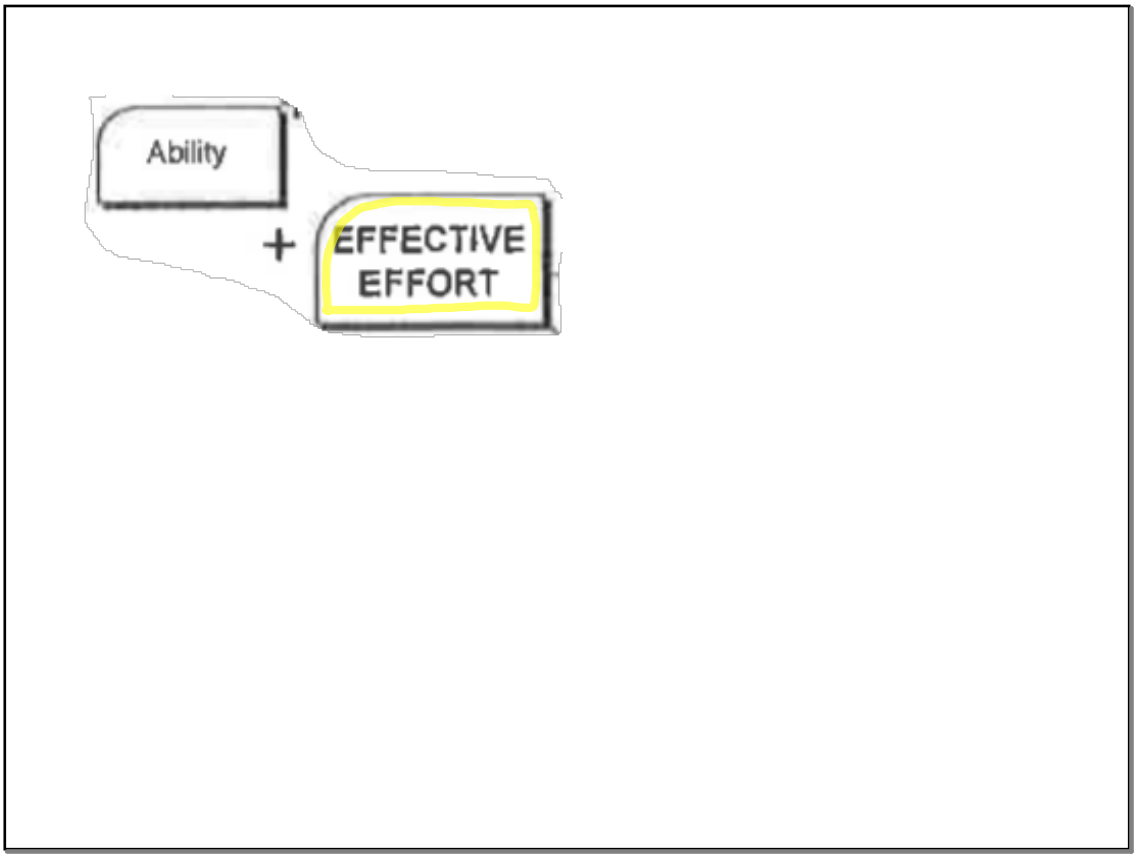
Schedule

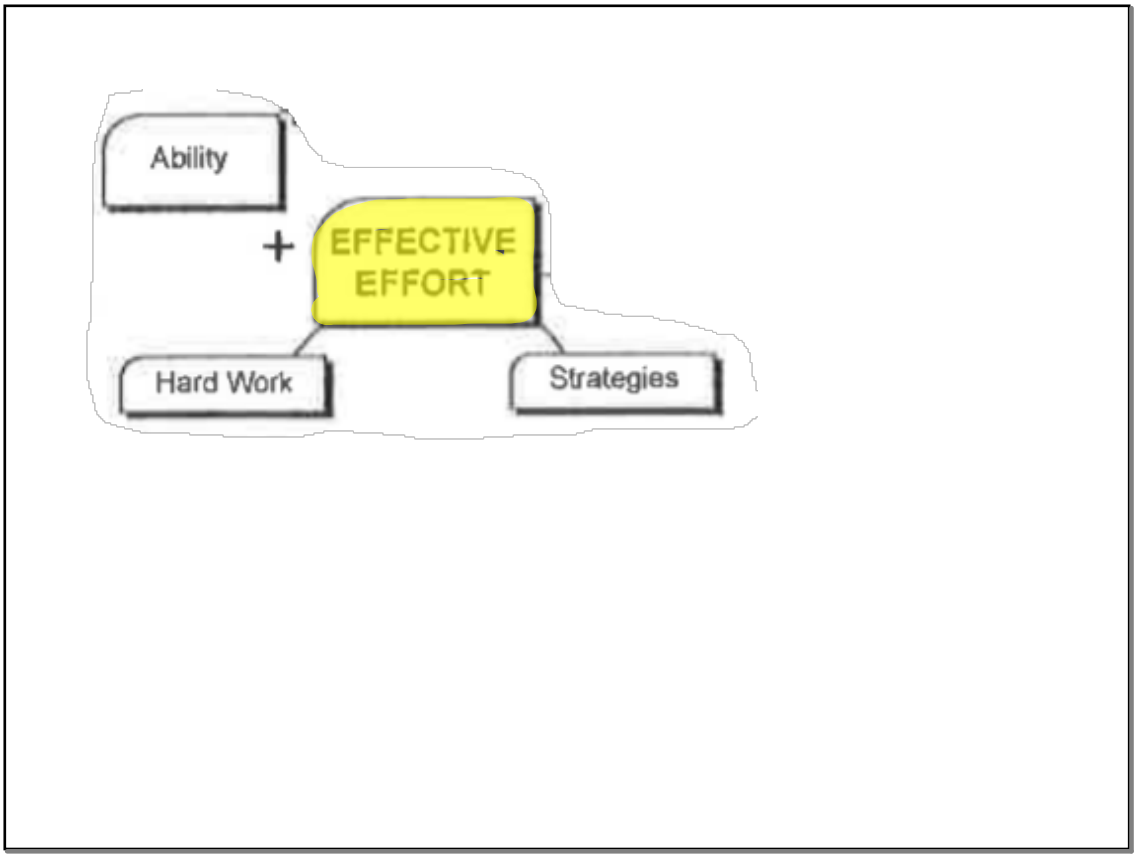
M, T, W — Contine to work on Transfer skills

Thursday - First Test

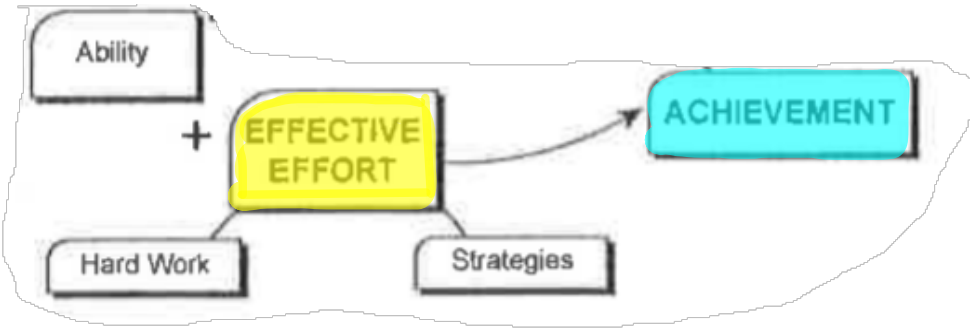


Notes from Day 4





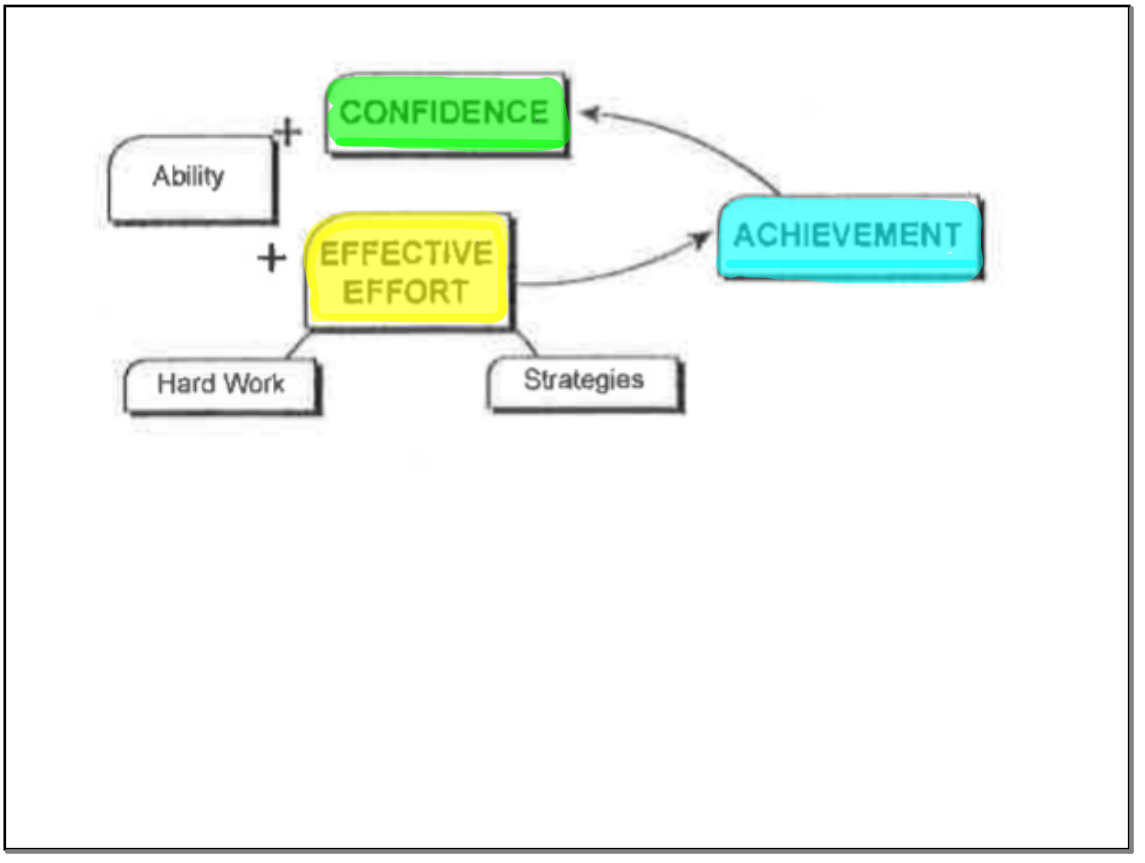
Notes from Day 4



Effective Effort

Effective effort is working hard and using learning strategies deliberately to "get smarter" at important knowledge and skills.

Notes from Day 4



What It Means to Work Hard

- **Time:** A willingness to spend the hours needed to finish the job well
- **Focus:** Concentrating only on the work; no TV or other distractions
- **Resourcefulness:** Knowing where to go and whom to ask for help when I'm really stuck
- **Use of feedback:** Looking carefully at responses to my work so I know exactly what to fix
- **Commitment:** Being determined to finish and do my very best work

Persistence: If one strategy isn't working, trying different ones until I find one that works

Notes

Aim #1 Use function language and notation

$y =$

$f(10)$

Clarification before we start

$f(x) = 10$

$f(x) = 4x + 2$

Input 10

output $4(10)+2$

$x = 10$ ← input

$f(10)$ ← output

Notes from Day 4

$y = 2x - 7$ $\quad y = -3n + 10$ $\quad y = 2x^2 - 1$

$f(x) = 2x - 7$ $\quad g(n) = -3n + 10$ $\quad h(x) = 2x^2 - 1$

means to Evaluate the function

$f(-3) = 2(-3) - 7 = -6 - 7 = -13$

$f(-3) = 13$

$g(0) = -3(0) + 10 = 10$

$h(-4) = 2(-4)^2 - 1$

$2(16) - 1 = 31$

---

find x if $f(x) = 5$

the output is 5

$f(x) = 2x - 7$

$f(6) = 5$

$5 = 2x - 7$

$12 = 2x$

$x = 6$

find n if $g(n) = 23$

$g(n) = -3n + 10$

Notes from Day 4

Evaluating Functions on graphing calculators

$f(x) = x^2 - 4x + 4$

input → output

x	$f(x)$
0	
1	
2.3	
3	
4	
12	
-5	

Notes from Day 4

return calculators

↓

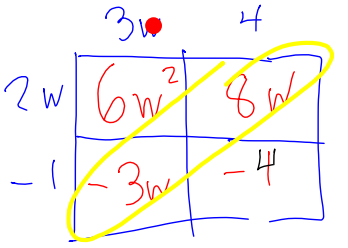
B.B.

↓

Aim #2

Aim # 2 Multiply (simplify) Binomial products

Notes from Day 4

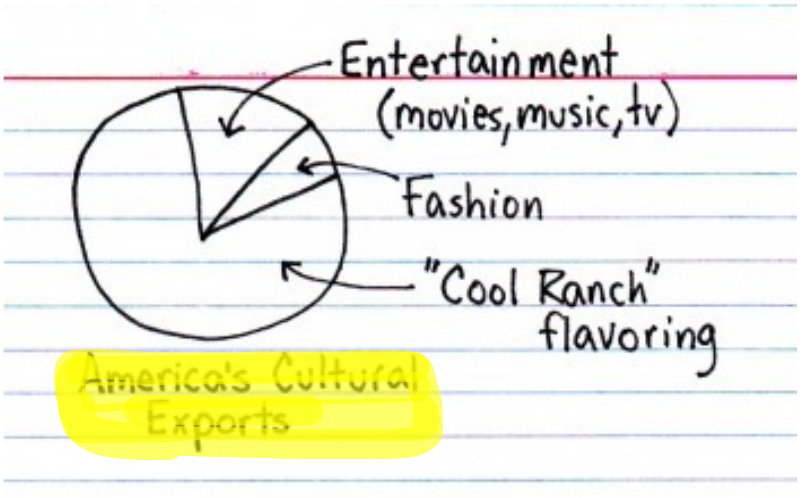
FOIL	HAPPY FACE	Box
$(x+5)(x+7)$	$(a-11)(a+2)$	$(3w+4)(2w-1)$
$x^2+7x+5x+35$	$a^2-11a+2a-22$	
$x^2+12x+35$	$a^2-9a-22$	$6w^2+5w-4$

$(x+3)(4x^2+3x+1)$

Notes from Day 4

A matter of taste.

Posted on July 20, 2011 by Jessica Hagy



What came first ?

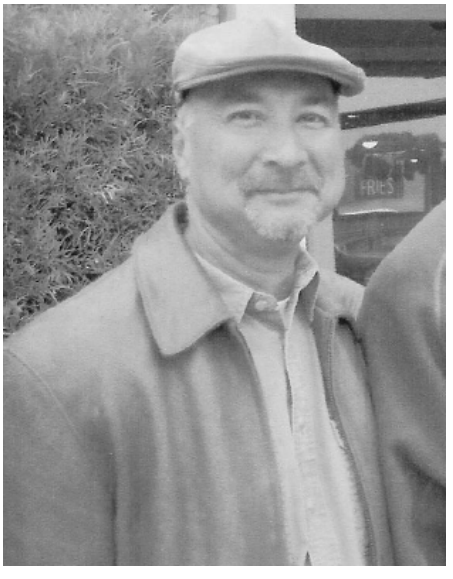
or

?

Notes from Day 4

Vincent Alvarez

Notes from Day 4



Shang-hai
Escape

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San Francisco

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?

↓

pHD
chemistry

Notes from Day 4

Shaing-hai

Escape

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San Francisco

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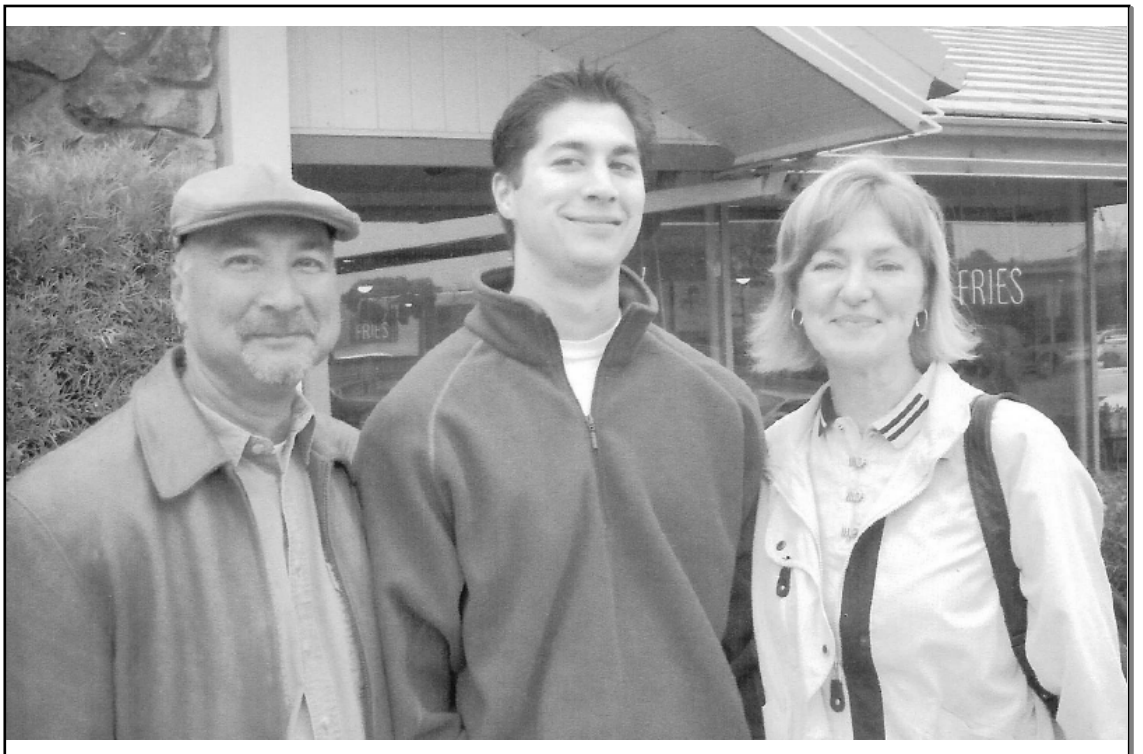
pHD

chemistry

Persevere

Notes from Day 4



Notes from Day 4

Assignment #4

another handout !

- pdf

Notes from Day 4

Aim #2