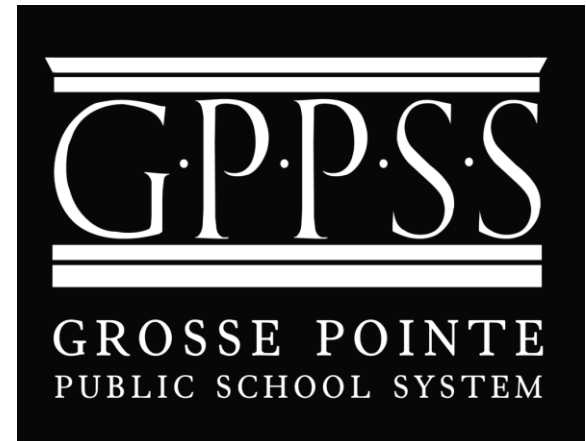


Why Literacy?



UM Secondary Teacher Education Program Structure

Semester 1	Semester 2	Semester 3
Disciplinary/ Subject-Area Literacy Course	Subject-Area Methods Course	Student Teaching Seminar
Field Practicum 1	Field Practicum 2	Student teaching
Education in a Multicultural Society Course	Educational Psychology Course	

Content Specific Literacy



71111959 www.fotosearch.com

Read math text

Discuss concepts using vocabulary

Create concrete meaning

Connect all text forms

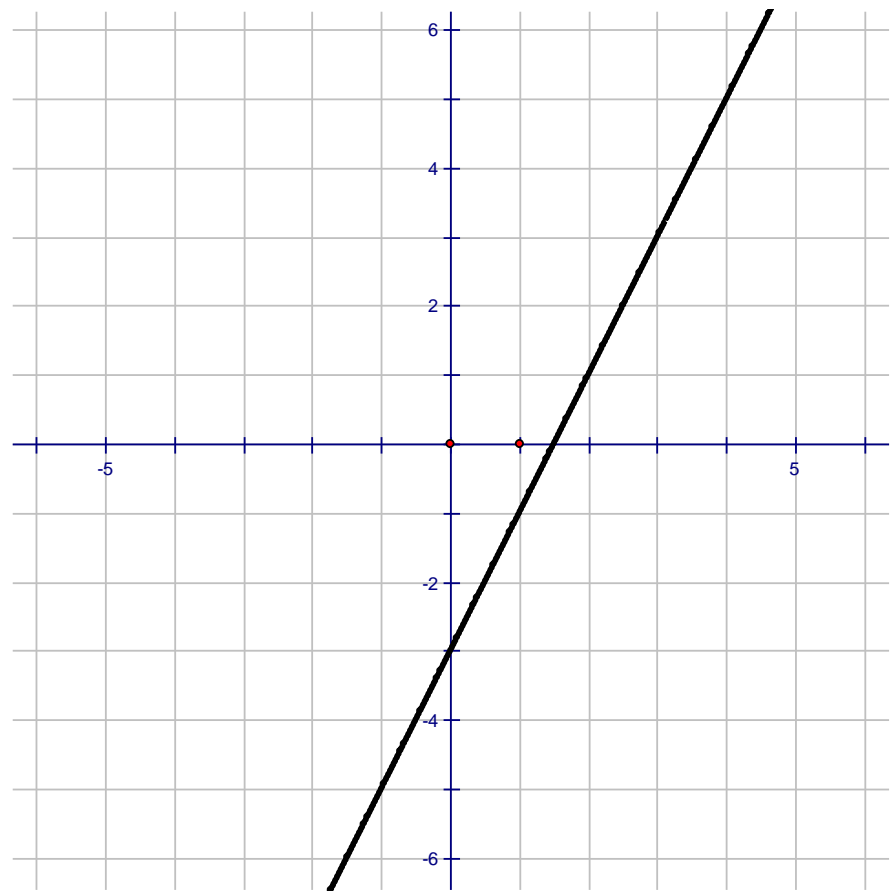
Read and write formulas...equations...charts...tables...graphs

Literacy is Seeing

Input	Output
0	-3
1	-1
2	1
3	3
4	5

You're running a race in which you begin 3 feet behind the start line. You run at a rate of 2 feet per second. How far past the start line are you after 4 seconds?

$$y = 2x - 3$$



Textbook Language

KEY CONCEPT

For Your Notebook

Factoring Polynomials

Definition

A factorable polynomial with integer coefficients is **factored completely** if it is written as a product of unfactorable polynomials with integer coefficients.

Examples

$2(x + 1)(x - 4)$ and $5x^2(x^2 - 3)$ are factored completely.

$3x(x^2 - 4)$ is *not* factored completely because $x^2 - 4$ can be factored as $(x + 2)(x - 2)$.

(Larson et al., 2008)

- 2 or 3 per day
- Foreign Language

GCF can be taken out

KEY CONCEPT

For Your Notebook

Factoring Polynomials

Definition

A factorable polynomial with integer coefficients is **factored completely** if it is written as a product of unfactorable polynomials with integer coefficients.

in front of variables

Nothing left to take out - all bubbles

mult.

Sum of monomials (letters & numbers)

Examples $\rightarrow -7, 12, \text{etc.}$

$2(x + 1)(x - 4)$ and $5x^2(x^2 - 3)$ are factored completely.

Not a per.

$3x(x^2 - 4)$ is *not* factored completely because $x^2 - 4$ can be factored as $(x + 2)(x - 2)$.

Diff. of per.

All gcf's out and all factors attached by mult.

Our Language

Factored Polynomial

A polynomial w/ all integer coefficients (no frac. or dec.) is factored completely if no more # gcf's can come out and all factors (bubbles) cannot be shrunk.

Typical - Run for Cover

58. ★ **SHORT RESPONSE** A woodland jumping mouse hops along a parabolic path given by $y = -0.2x^2 + 1.3x$ where x is the mouse's horizontal position (in feet) and y is the corresponding height (in feet). Can the mouse jump over a fence that is 3 feet high? *Explain.*

(Larson et al., 2008)

Woodland Mouse...Really?

Horizontal
Parabolic
Corresponding



$-\frac{b}{2a}$
Vertex
Maximum

What Do I Do?

- Free Writes
 - Base teaching/problems off responses
- Vocab/Concept Check via Discussion
- Smart Broad Break Down
- Early and Gradual Intro
 - Reduces Fear Factor
- Verbal Plans
 - Ignore Numbers - General Outline
- Vary Presentation

Take Aways

- Literacy Instruction Essential
 - Presented by discipline
- Kids won't if they can't
- Make it simple
- Teach them to attack on their own
 - Promotes Ownership
 - Builds confidence

Every teacher is a teacher of literacy

References

Larson, Ron, Boswell, Laurie, Kanold, Timothy D., & Stiff, Lee (2008).
Algebra 2 (Michigan). Evanston, IL: McDougal Littell.