Top Teacher Moves
Spiraling & Re-Engagement
Day 4, Mar 10, 2025

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#TopTeacherMoves

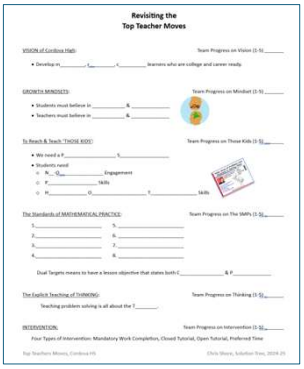
First Picture	Second Picture
Time = 0 hrs	Time = 1 hr
Candle A initial height = 20 cm Candle B initial height = 10 cm	Candle A height after 1 hour = 16 cm Candle B height after 1 hour = 9 cm

1

Your Rockstar

2

Re-Engaging With Our Learning


Revisiting the
Top Teacher Moves

1) Individually
2) Collaboratively
3) Resourcefully

3

Re-Engaging With Vision & Mindset

Develop m**otivated**, r**esiliant**, c**ompassionate** learners who are college and career ready.

Students must believe in **Themselves** & **Teacher**

Teachers must believe in **Themselves** & **Students**

4

Re-Engaging With Those Kids

To Reach & Teach 'Those Kids':

- We need a P**aradigm** s**hift**
- Students need
  - N**O**-O**ptions** E**ngagement**
  - P**rerequisite** s**kills** and N**umber** s**ense**
  - H**igher** o**rder** T**hinking** s**kills**

5

Re-Engaging With Thinking

1. **Solving Problems**
2. **Reasoning**
3. **Viable Arguments**
4. **Modeling**
5. **Tools**
6. **Precision**
7. **Structure**
8. **Repeated Reasoning**

Dual Targets means to have a lesson objective that states both C**ontent** & P**ractices**

Teaching problem solving is all about the T**ask**.

6

Re-Engaging with Intervention



CFA

7

Re-Engagement with Group Work

Direct instruction on procedures should occur between C**oncepts** development and opportunities for A**pplications**.

- The 3 types of group structures are H**omogenous**, H**eterogenous** & R**andom**.
- The 3 principles of making group work work with less work are: N**orms**, V**igilance** & A**ccountability**.

8

Re-Engagement with Your Goals

ACADEMIC: 3% increase for EL Students. Your prediction = **?** %

CULTURAL: 3% increase in Celebrations. Your prediction = **?** %

The ultimate goal of any Professional Learning Community is

C**ontinuos** I**mprovement**

of all students learning G**rade** L**evel** or higher.

Your Problem to Solve **?**.

Your Top Teacher Move **?**.

9

Your Progress

Top Teacher Moves

1. High Expectations for and Communicated to ALL Students
2. Dual Objectives for the Explicit Teaching of Thinking
3. Warm-Up on Prerequisite Skills & Numeracy
4. No-Options Engagement
5. Tasks! (60% of the time)
6. Group Work, Norms & Group Quizzes
7. Concepts-Procedures-Applications (C-P-A Progression)
8. Lapboards (Engagement, Feedback Techniques)
9. 3-Reads, Close Reading
10. Higher-Order Thinking Questions
11. Chunking
12. Gradual Reel-In
13. Manipulatives & Measurement
14. Structured Notes with Feedback
15. Cumulative Assignments & Assessments
16. Re-Engagement instead of Re-Teaching
17. Use Student Thinking in Formative Assessment
18. Differentiation by Extension
19. Instructional Technology
20. Process Reward System
21. Boot Camp (Unit 0)
22. Reflective Conclusion
23. Home Base: Teach Students How to Play School; More Textbooks for Students, Less for Teachers

Problem = 3.0
Top Move = 2.9

bit.ly/CordovaMath
Response Day 4

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Celebrations & Challenges

Proximity & Overt Response (Up & Doing)

Number Sense Activities

Tasks

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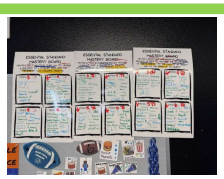
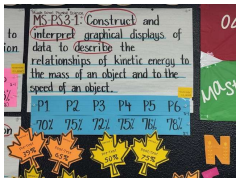
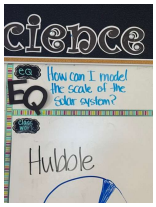
GVC Celebrations

12

Collaborative Celebrations







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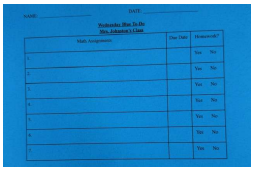
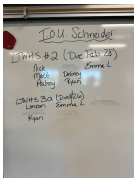
Those Kids Celebrations





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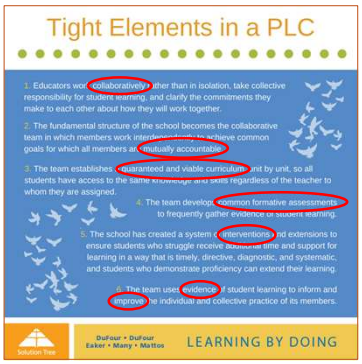
Top Moves Celebrations

15

PLC Tights



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Top Teacher Moves
Our 5 Days Together

Aug 5: Reaching & Teaching 'Those Kids'
Oct 7: Top Teacher Moves; Expectations & Tasks
Jan 13: Concepts, Applications & Group Work
GVC: Scope & Sequence, and Pacing

Mar 10: Re-Engagement & Spiraling
GVC: Essential Standards

Apr 28: Grading & Student Reflection
GVC: Final Exam 1

- Empowerment to Build Thinking Classrooms
- Effective Alternative to Foundations Pathway

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Group Work & GVC
Our Objectives Today

- The Value of Spiraling Assignments & Assessments
- Experience Re-Engagement Activities
- GVC: Essential Standards

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Group Work & GVC

Our Success Criteria Today

- Schedule your Semester Re-Engagement
- Schedule a Spiral Assignment
- Identify your Math I Essential Standards

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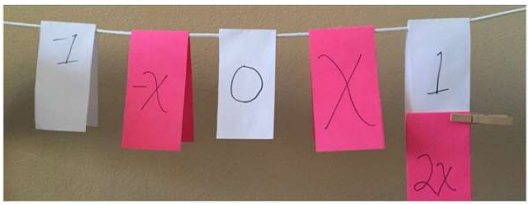
Clothesline Math

The Master Number Sense Maker!



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Clothesline Math

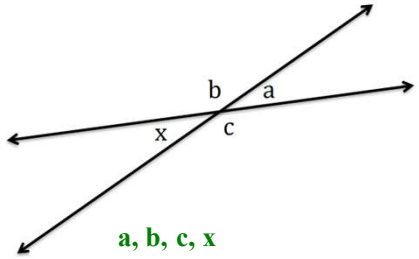
Introduction

$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$

21

Clothesline Math
Geometry

G.CO.9: See the structure of vertical angles and linear pairs to prove that vertical angles are congruent.



a, b, c, x

22

Break



10 minutes until

Re-Engage with Re-Engagement

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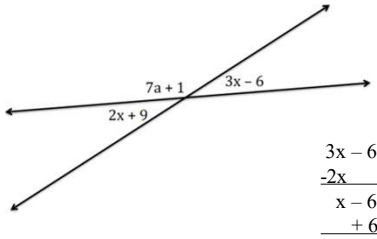
Clothesline Math
Geometry with Algebra

A.REI.1: Solve equations with variables on both sides to determine the measure of vertical angles.

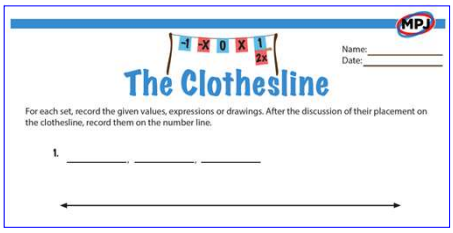


$3x - 6 = 2x + 9$
$-2x \quad = -2x$
$x - 6 = 9$
$+6 = +6$
$x = 15$

2x + 9, 3x – 6, 2x, 3x, x

24

Clothesline Math
Handout



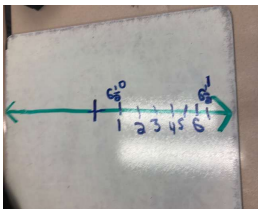
Discussions, Deductions & Decisions

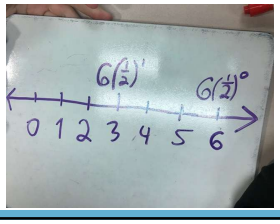
25

Clothesline Math
as Warm-Ups

$$y = 6\left(\frac{1}{2}\right)^x$$

$$6\left(\frac{1}{2}\right)^0 \quad 6\left(\frac{1}{2}\right)^1$$





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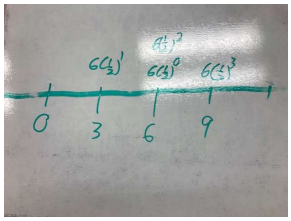
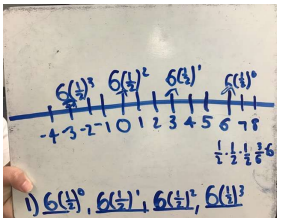
Clothesline Math
as Warm-Ups

$$6\left(\frac{1}{2}\right)^2 \quad 6\left(\frac{1}{2}\right)^3$$





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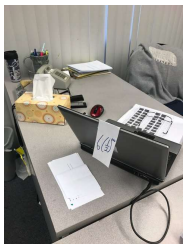
Clothesline Math
as Warm-Ups

$$6\left(\frac{1}{2}\right)^{100}$$

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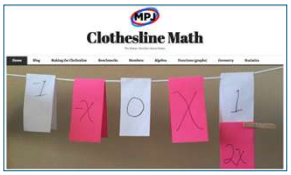
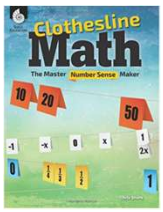
Clothesline Math
My Contributions



#clotheslinemath

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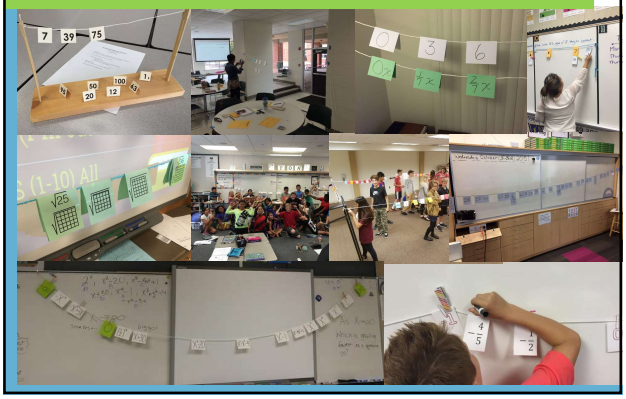
Clothesline Math
From Around the World



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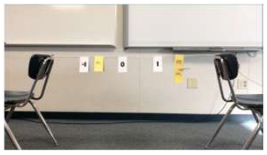
Clothesline Math
Reflection

Why Clothesline Math?



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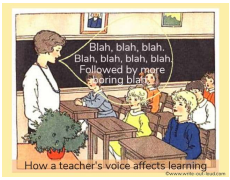
Re-Teaching vs. Re-Engagement



Same thing slower & louder

Experience the content in a new way

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Re-Engagement vs. Re-Teaching

SVMI SILICON VALLEY MATHEMATICS INITIATIVE

Re-Teaching	vs.	Re-Engaging
teaching the unit again	→	revisiting student thinking
addressing missing basic skills	→	addressing conceptual understanding
do the same problems over	→	examine the task from different perspectives
more practice; learn procedures	→	critique approaches; make connections
focus mostly on underachievers	→	engage entire class in mathematics
cognitive load usually lower	→	cognitive load usually higher

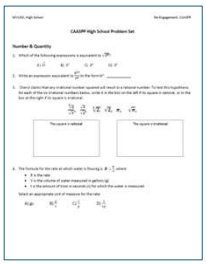
Same thing slower & louder

Experience the content in a new way

33

CAASPP Re-Engagement
Practice Test

Identify the prompts you teach in Math I.



Choose the 5 hardest problems for your students.

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Re-Engagement Game

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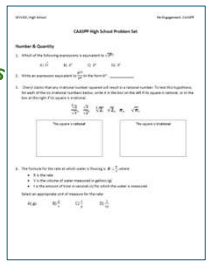
CAASPP Re-Engagement
Practice Test

For which questions are you preparing your students?



For which are you not preparing them?

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Lunch

Up next: Essential Standards

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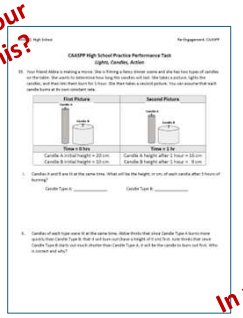
CAASPP Re-Engagement
Performance Task

In what ways are you preparing your students for this?



In what ways are you not?

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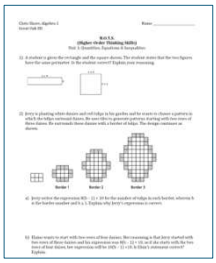
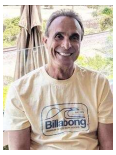
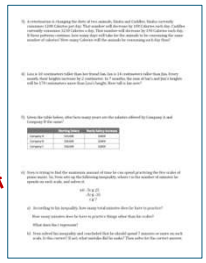
Unit Re-Engagement







Are your students doing this kind of math?

SVMI
SILICON VALLEY
MATHEMATICS INITIATIVE

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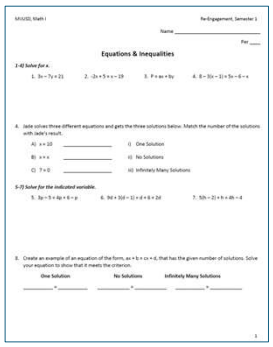
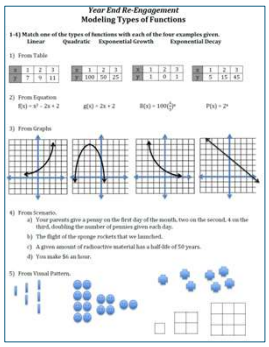
Semester/EOY Re-Engagement



Equations & Inequalities



Year End Re-Engagement
Modeling Types of Functions

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Study Guide
Re-Engage Experience

"I loved seeing my students engaged with mathematical discussions. Students were eager to work in their groups, help each other and present on the posters around the classroom.

They took ownership of the work and felt very comfortable showing their work around the room. **This is the best way to prepare students for a summative exam**."

-- Monica Trillo, Murrieta Mesa

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Reaching & Teaching ALL Kids
Low-Investment, High-Yield Strategies

Top Teacher Moves

1. High Expectations for and Communicated to ALL Students
2. Dual Objectives for the Explicit Teaching of Thinking
3. Warm-Up on Prerequisite Skills & Numeracy
4. No-Options Engagement
5. Tasks! (60% of the time)
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20. Process Reward System
21. Boot Camp (Unit 0)
22. Reflective Conclusion
23. Home Base: Teach Students How to Play School; More Textbooks for Students, Less for Teachers

Which of these did you see in the Re-Engagement Activities?

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Re-Engagement Protocol

Monday	Tuesday	Wednesday	Thursday	Friday
Intro & Unit Set 1	Unit Set 2	Formative Day	Unit Set 3 & 4	
Formative/Reflective Day	Pre-Final Activities	Final Exams	Final Exams	Final Exams

Calendar YOUR Re-Engagement

Monday	Tuesday	Wednesday	Thursday	Friday
Intro & Set 1	Practice Set 2	Correct & Reflect	Practice Set 3	Practice Set 4
Correct & Reflect	PT Day 1	PT Day 2	Correct & Reflect	Formative Day
Quiz A	Quiz B	Quiz C (PT)	Correct & Reflect	Formative Day

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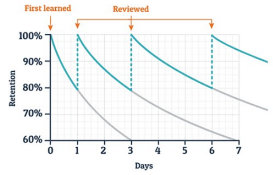
Cumulative Homework
Spaced vs. Massed Practice

Effect size = 0.71

Typical Forgetting Curve for Newly Learned Information



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Cumulative Homework
Spaced vs. Massed Practice

Learn  Practice  Practice

Practice  Practice  Practice  Practice  Practice  Practice  Practice 

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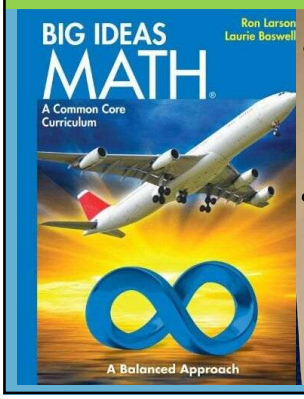
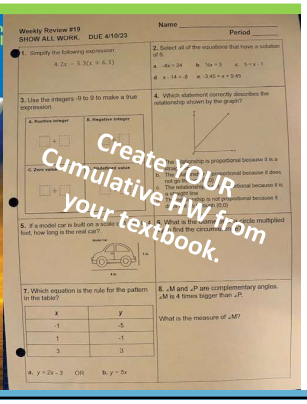
Cumulative Homework





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Break

10 minutes until

We Determine your ESSENTIAL Standards.

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Guaranteed and Viable Curriculum

Essential Standards

Every Student, Every Day
Without Predictions

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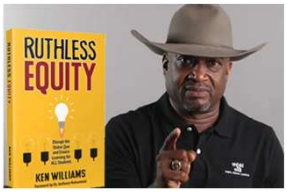
Guaranteed and Viable Curriculum
Guaranteed Learning



"Equitable practice begins with identifying **grade-level essential learning outcomes** in every course and content area. Do you see any mention of "except for?"

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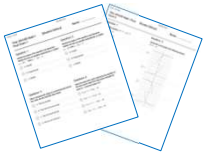
Teamwork
Guaranteed and Viable Curriculum

Your GVC




Common Summative/Unit & Formative Assessments CSAs & CFAs

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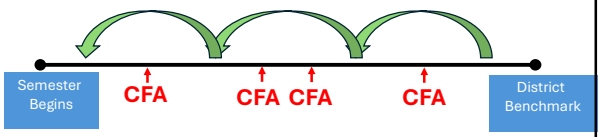
Guaranteed and Viable Curriculum
Goal for Key Principle 1 of 3

Common **UNIT** Assessments



Common **FORMATIVE** Assessments

So, limit your number of Essential Standards

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Top Teacher Moves
Our Norms

- **Advance the Vision:** ***Develop motivated, compassionate and resilient learners who are college and career ready.***
  - **All Voices**
    - **Keep it Professional, Not Personal**
      - **Consensus, Not Compromise**

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Teamwork
Guaranteed and Viable Curriculum
Your Scope & Sequence

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Teamwork
Guaranteed and Viable Curriculum
Your Essential Standards

Key for Academic Standards 4-Mastery 3-Proficient 2-Emergent 1-Significant Gaps	4 Point Scale to % Conversion 3.00-4.00: A 2.50-2.99: B 2.00-2.49: C 1.50-1.99: D Below 1.50: F	
SEMESTER 1 Standards	**UNIT/ Chap**	**GRADE**
Solve linear and absolute-value equations. A-REI.1 Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method. A-REI.3 Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters. SMP. 1,6,7- not finding these	Unit 1 (Ch 1)	
Write and solve linear equations to model real-world situations. A-CED.1 Create equations and inequalities in one variable including ones with absolute value and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions. A-CED.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods. A-CED.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law V = IR to highlight resistance R.	Unit 1 (Ch 1)	
Solve/Graph linear and absolute-value inequalities on a number line. A-REI.3.1 Solve one-variable equations and inequalities involving absolute value, graphing the solutions and interpreting them in context	Unit 2 (Ch 2)	

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Solve Your Name

$V = Bh$

1.	$A = bc$	Area of a Rectangle
2.	$A = \frac{1}{2}bh$	Area of a Triangle
3.	$A = \pi r^2$	Area of a Circle
4.	$A = \frac{1}{2}(b_1 + b_2)h$	Area of a Trapezoid
5.	$\pi = \frac{C}{d}$	Definition of π
6.	$C = 2\pi r$	Circumference of Circle
7.	$V = lwh$	Volume of a Rectangular Prism
8.	$V = Bh$	Volume of a Prism
9.	$V = \frac{1}{3}Bh$	Volume of a Pyramid
10.	$V = \pi r^2 h$	Volume of a Cylinder
11.	$V = \frac{1}{3}\pi r^2 h$	Volume of a Cone
12.	$V = \frac{m}{D}$	Density & Volume
13.	$F = \frac{W}{d}$	Force of Momentum
14.	$I = prt$	Simple Interest
15.	$d = rt$	Distance
16.	$y = mx + b$	Slope-Intercept Form
17.	$P = 4s$	Perimeter of a Square
18.	$P = 2l + 2w$	Perimeter of a Rectangle
19.	$E = IR$	Voltage of a an Electric Circuit
20.	$P = I^2R$	Power of a an Electric Circuit
21.	$a + b + c = 180$	Triangle Sum
22.	$Ax + By + C = 0$	Standard Form of a Line
23.	$Ax + By + Cz + D = 0$	Standard Form of a Plane
24.	$K = \frac{1}{2}mv^2$	Energy
25.	$s = \frac{1}{2}gt^2$	Distance

$B = \frac{V}{h}$

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Teamwork

Guaranteed and Viable Curriculum

Next Steps

Post Essential Standards to Google Drive

Use next year… for CSA & CFA

Final Exam 1

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Group Work & GVC

Our Objectives Today

- **The Value of Spiraling Assignments & Assessments**
- **Experience Re-Engagement Activities**
- **GVC: Essential Standards**

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Group Work & GVC
Our Success Criteria Today

- Schedule your Semester Re-Engagement
- Schedule a Spiral Assessment
- Identify your Math I Essential Standards

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Evaluation

bit.ly/CordovaEval4

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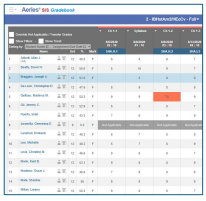
Our Next Day

Apr 28




Grading & Reflection
GVC: Final Exam 1

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So Reach & Teach Those Kids …

…with the faith that they can learn it, and that we can teach it to them,

…and change this world, one math lesson at a time.

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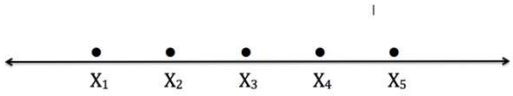
Clothesline Math
Stats

Students will broaden their knowledge of variability and statistical processes.



Smaller *Range*

Smaller *Standard Deviation*

Smaller *Average*

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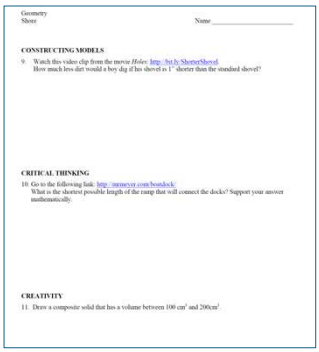
Cumulative Group Quiz



Geometry
Shore

Name_____

CONSTRUCTING MODELS

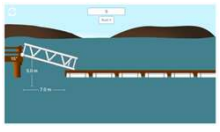
9. Watch this video clip from the movie *Holes*: http://bit.ly/ShorterShovel
How much less dirt would a boy dig if his shovel is 1" shorter than the standard shovel?

CRITICAL THINKING

10. Go to the following link: http://mrnewyr.com/boatdock/
What is the shortest possible length of the ramp that will connect the docks? Support your answer mathematically.

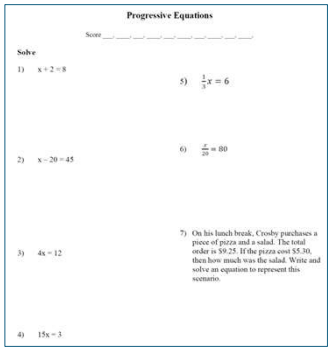
CREATIVITY

11. Draw a composite solid that has a volume between 100 cm³ and 200cm³.



63

Progressive Equations



Progressive Equations

Score ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

Solve

1) $x + 2 = 8$

2) $x - 20 = 45$

3) $4x = 12$

4) $15x = 3$

5) $\frac{1}{3}x = 6$

6) $\frac{x}{20} = 80$

7) On his lunch break, Crosby purchases a piece of pizza and a salad. The total order is $9.25. If the pizza cost $5.30, then how much was the salad. Write and solve an equation to represent this scenario.

For which essential skills would this vehicle be useful?

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Reaching & Teaching ALL Kids
Low-Investment, High-Yield Strategies

Top Teacher Moves

1. High Expectations for and Communicated to ALL Students
2. Dual Objectives for the Explicit Teaching of Thinking
3. Warm-Up on Prerequisite Skills & Numeracy
4. No-Options Engagement
5. Tasks! (60% of the time)
6. Group Work, Norms & Group Quizzes
7. Concepts-Procedures-Applications (C-P-A Progression)
8. Lapboards (Engagement, Feedback Techniques)
9. 3-Reads, Close Reading
10. Higher-Order Thinking Questions
11. Chunking
12. Gradual Reel-In
13. Manipulatives & Measurement
14. Structured Notes with Feedback
15. Cumulative Assignments & Assessments
16. Re-Engagement instead of Re-Teaching
17. Use Student Thinking in Formative Assessment
18. Differentiation by Extension
19. Instructional Technology
20. Process Reward System
21. Boot Camp (Unit 0)
22. Reflective Conclusion
23. Home Base: Teach Students How to Play School; More Textbooks for Students, Less for Teachers

Which of these did you see in the Cumulative Assignments & Assessments?

Note: Re-Engagement can be cumulative.

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