

Overview of Region 16's AVATAR Project 2013-14

AVATAR Statewide Coordinator/Facilitator Meeting

Austin, TX

June 6, 2014

The Texas Panhandle P-16 Council

MEMBERS

--55 of the panhandle's independent school districts

**--West Texas A&M University, Amarillo College, Clarendon College,
Frank Phillips College**

--Region 16 Education Service Center

--Panhandle Twenty/20

**--Representatives from early childhood education and from the
business community**

Region 16's Math Vertical Alignment Team (AVATAR)

**--Six Higher Education Math
Instructors (4 actively participating)**

**--Eight High School Math Teachers (3
actively participating)**

--ESC Instructional Services Director

--P-16 Specialist

Future Plans for Math Journal

The Not-As-Good News

Number of actively participating team members has dropped

The Good News

Actively participating team members are committed to continue the project

Evolution of Math Journal

The Good News

**Journals being used at one high school and
one community college**

**Some HS students who used journals in `13-
14 will attend our 4-year IHE whose team
members will survey for effectiveness**

The Not-As-Good News

Few of the HS students feed into the CC

Evolution of Math Journal

The Good News

Trials: May & June `13

**Rolled-out drafts end of Fall `13 semester
and beginning of Spring `14 semester**

The Not-As-Good News

**A previously active HS team member
decided not to attempt the journal**

Evolution of Math Journal

The Good News

Had six productive meetings with team members, with another scheduled for June

The Not-As-Good News

Four of the six meetings were one-on-one, so few opportunities to share info and build upon best practices

Future Plans for Math Journal

The Good News

Journals will be used at beginning of Fall `14 semester

Survey `14-15 college students RE effectiveness of their `13-14 HS journals

Continued revisions of journals to meet student needs

Future Plans for Math Journal

The Good News

**Sharing products and experiences with
regional teachers:**

July 10 R16 ESC Math Conference

**July 29 R16 ESC Instructional Strategies
Conference**

1-8-14
- Jim
Jimmy Nash

Table of Contents

Hierarchy of Operations

Domain and Range

Linear Equations and Inequalities

Graphs and Solutions

Systems of Linear Equations

Rules of Exponents

Logarithms

Properties of Logs

Solving Log Equations

Factoring Trinomials

Complex Numbers

Hierarchy of Operations

Order of Operations -- PEMDAS

P – parenthesis(), brackets [], fraction lines $\frac{\text{numerator}}{\text{denominator}}$

E – exponents

M & D– multiplication and divisions, left to right, as they occur

A & S – addition and subtraction, left to right, as they occur

1. $4 + 5 \times 5 = \boxed{29}$

2. $(4 + 5)6 = \boxed{54}$

This is your Happy Year being almost over present from me.

For some of you, it is my graduation present to you. For some of you, it is my, congratulations, you made it through my class present. For all of you, I hope this is something that you hold on to and use as you continue to be educated individuals - however that looks.

Tape the envelope on the inside cover of the spiral on 3 sides. Leave the top open.

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3. Integers
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5. Rectangular Coordinate System
(x, y)
6. Linear functions
7. Functions
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- 10. Parent Functions
- 11. Polynomial Operations
- 12. Systems of Linear
Equations
- 13. Solving Polynomial
Equations

Fractions

- Must have common denominators to add or subtract

$$\text{Example : } \frac{1}{2} + \frac{2}{3}$$

$$\text{Example : } \frac{1}{\sin x} - \frac{1}{\sin x + 1}$$

$$\text{Example : } \frac{2}{x} - \frac{3}{x-2}$$

- Do not have to have common denominators to multiply

Example : $(\frac{2}{5})(\frac{4}{7})$

Example : $(\frac{\sin x}{\cos x})(\frac{1}{\cos x})$

Example : $\frac{5-x}{x+4} \cdot \frac{2}{x^2-4}$

There are no zero exponents.

There are no parentheses.

There are no negative exponents.

Each base occurs only once in the expression.

Multiply out bases that are constants.

Fill out chart and explain why $b^0 = 1$ and $b^{-n} = 1/b^n$:

| |
|--------------------------|
| $5^3 = 125$ |
| $5^2 = 25$ |
| $5^1 = 5$ |
| $5^0 = 1$ |
| $5^{-1} = \frac{1}{5}$ |
| $5^{-2} = \frac{1}{25}$ |
| $5^{-3} = \frac{1}{125}$ |

$$= \frac{5}{19} u^{-18} v^{13}$$

$$= \frac{5v^{13}}{19u^{18}}$$

Answer: $\frac{b^{15}}{5a^{10}}$

$$\left(\frac{20x^{12}y^{-9}z^8}{10x^9y^{-4}z^2} \right)^{-3}$$

$$= \left[\left(\frac{20}{10} \right) \left(\frac{x^{12}}{x^9} \right) \left(\frac{y^{-9}}{y^{-4}} \right) \left(\frac{z^8}{z^2} \right) \right]^{-3}$$

$$= [2x^3y^{-5}z^6]^{-3}$$

$$= (2)^{-3}(x^3)^{-3}(y^{-5})^{-3}(z^6)^{-3}$$

$$\left(\frac{12x^{15}y^{-6}z^{10}}{4x^{12}y^{-3}z^7} \right)^{-2}$$

The Texas Panhandle P-16 Council

INITIATIVES & RESOURCES

--P-16 Website

--P16 Newsletter to teachers

**--Collaborating with our region's IHEs to
provide developmental education data to
districts**

The Texas Panhandle P-16 Council

INITIATIVES

**--Assist ISDs and IHEs as they
implement curricular requirements of
HB 5, with emphasis on development
of MOU**

The Texas Panhandle P-16 Council

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