

Let's Go Shopping!!!

- Pick at least three items and fill in the table on Quiroz's Tienda given to you at the door.

Let's Go Shopping!!!

RIDDLE MATH

HE SAID IT TO HIS SISTERS.
HE SAID IT TO HIS BROTHERS.
WHAT DID THE WITTY RAINDROP
EXCLAIM TO ALL THE OTHERS?

NAME _____

DIRECTIONS:

Use the information given in the chart to figure out the missing values, each of which is indicated by a letter. Round the values to the nearest cent. Find each answer in the code and write the corresponding letter above it.

ARTICLE ON SALE	ORIGINAL PRICE	-PERCENT DISCOUNT	= SALE PRICE	+PERCENT SALES TAX	= TOTAL AMOUNT
WATCH	\$50	10%	D	6%	H
CALCULATOR	\$45	25%	E	4%	Y
BICYCLE	\$110	20%	U	5%	N
TYPEWRITER	\$99.00	15%	W	6%	S
TENNIS RACKET	\$59.90	10%	M	4%	R
TURNTABLE	\$88.50	30%	A	$5\frac{1}{2}\%$	P
CAMERA	\$78	$33\frac{1}{3}\%$	L	$4\frac{1}{2}\%$	T
CASSETTE DECK	\$84.95	40%	O	5%	C

THE WITTY RAINDROP SAID:

\$54.34 \$84.15 \$50.97 \$89.20 \$53.52 \$50.97 \$53.91 \$65.36 \$61.95 \$92.40 \$35.10

\$61.95 \$92.40 \$45 \$54.34 \$47.70 \$56.07 \$33.75 \$33.75 \$89.20

\$61.95 \$53.52 \$52 \$50.97 \$88 \$45

Let's Go Shopping!!!

- Average of 36 students in Core Concepts 1 (Algebra Part 1).
- Abilities were mixed.
- Activity created a whole class community of learners.

Let's Go Shopping!!!

Think Pair Share

- Why did we play music?
- What tools do you think the students used to find their solutions?
- Why does the worksheet eliminate pronouns?

Engage All Students In Problem Solving Tasks

2014 NCTM Regional Conference
November 19-21

Essential Questions For Today

- How do you get students interested in math?
- How do you get the students to reason and make sense of numbers?
- How do you get students to write in the classroom?

Three Activities

- Let's Go Shopping Activity (Percents)
- Stars (Conversions)
- Costumes (Fractions)

Who Am I?

- High School Teacher for 17 years at Loara High School
- Taught everything from basic skills class to a Calculus
- NSF Noyce Teaching Fellow
 - ROBERT NOYCE TEACHER SCHOLARSHIP PROGRAM

Loara High School

- Hispanic or Latino 74.7%
- White 9.4%
- Asian 8.5%
- Black or African American 1.9%
- Filipino 2.9%
- Native Hawaiian/Pacific Islander 0.8%

Loara High School

- Socioeconomically Disadvantaged 69.8%
- English Learners 48.5%
- Students with Disabilities 8.8%

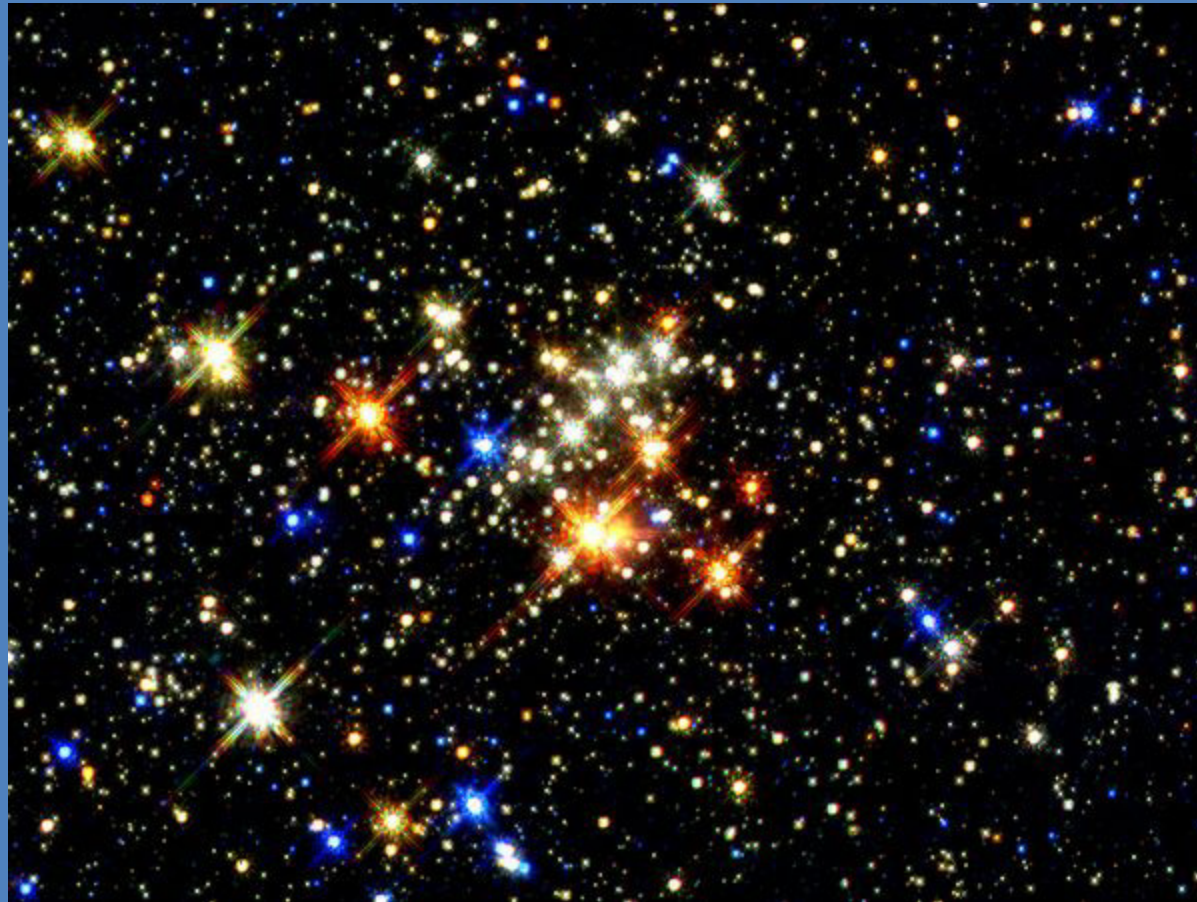
Teacher Tools in the Classroom

- LCD projector
- Document Camera
- Sound System
- Calculators
- Tablet



Andromeda Galaxy

What do you want to know about the stars?



Stars Activity Think Pair Shair

- Why would you include
 - Question 1 the guess question.
 - Question 2 the need to know question.
 - Question 3 Calculator Work
 - Question 5 Explain your Answer


Bunny Costume Activity

Family Fun

The Original Problem

Rabbit Costumes
 This problem gives you the chance to:
 • use division with fractions

Gail is making costumes for a school play.



Each rabbit costume needs one and one half yards of white fur fabric, a yard of blue striped fabric, and a quarter of a yard of pink felt for the ears.

1. Gail needs to make eight rabbit costumes.

How much material does she need?

white fur fabric: 12 yards
 blue striped fabric: 8 yards
 pink felt: 2 yards

white ~~8 yd~~ 12 yd
 blue stripe 8 yd

$$1\frac{1}{2} \text{ yd} \times 8 = 8 + 4 = 12$$

$$\frac{3}{2} \times \frac{8}{1} = \frac{24}{2} = 12$$

$$1 \times 8 = 8$$

$$\frac{1}{4} \times 8 = 2$$

$$\frac{1}{4} \times \frac{8}{1} = \frac{8}{4} = 2$$

Ixchel



Mom and Ixchel



The situation

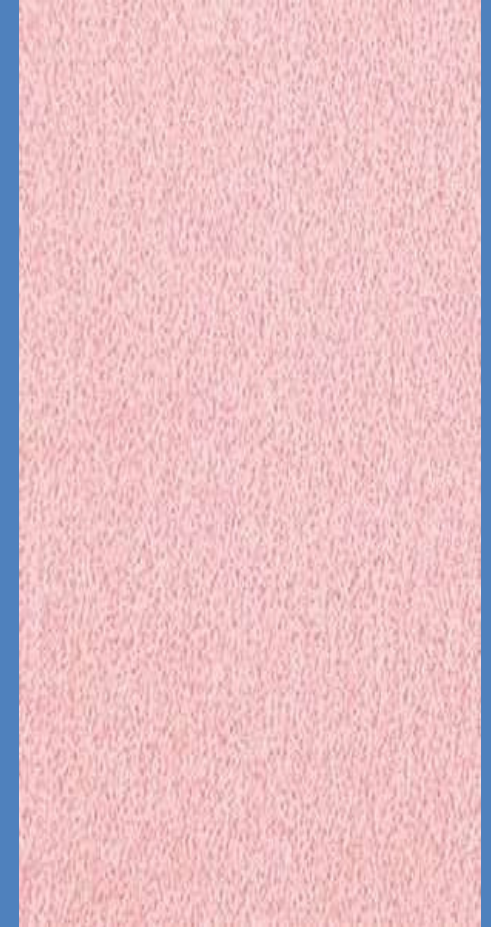
- My daughter and seven of her friends are bunnies for a school play. Mom volunteered to sew all of the bunny outfits.



What do you need to know?

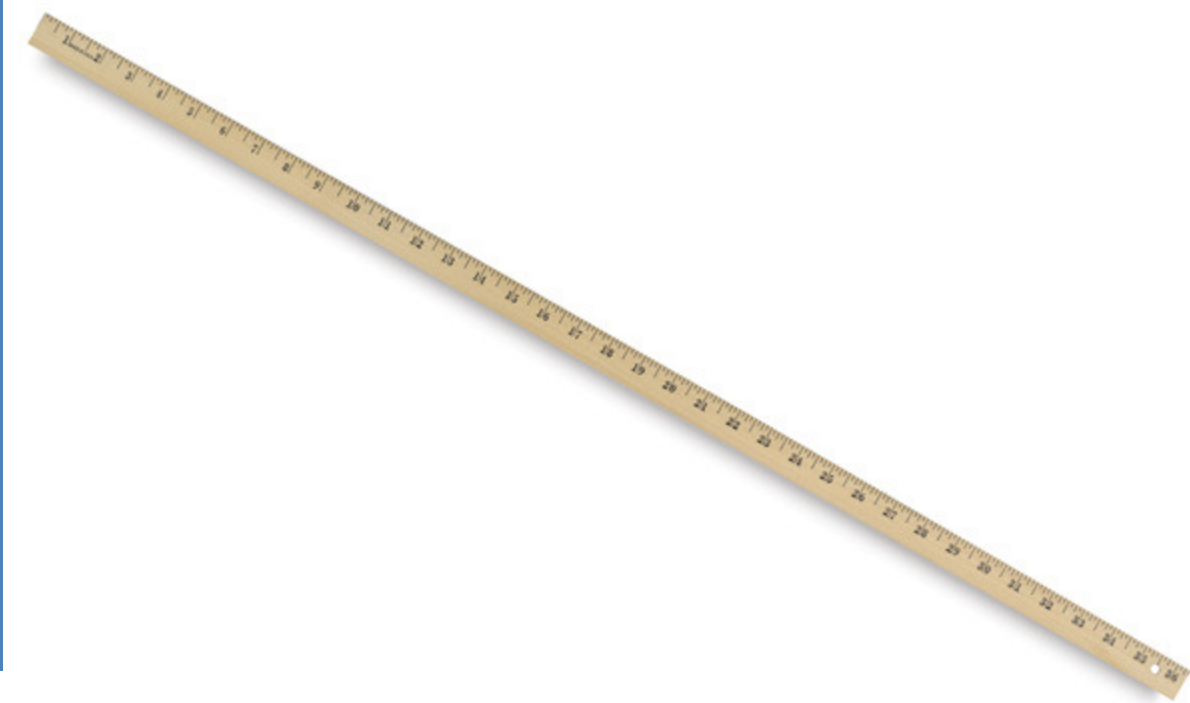


Fabric for the costume



Unit Measure

Yards



Bunny Rabbit Activity Think Pair and Share

- Why did I include pictures?

Where do these activities come from?

- Discount worksheets
- Fun facts website
- InsideMathematics.org

Other Websites

- Dan Meyers blog
 - <http://blog.mrmeyer.com/>
- Andrew Stadel blog
 - <http://mr-stadel.blogspot.com/>
- [Mathalicious.com](http://mathalicious.com)
- NCTM
- RobertKaplinsky.com

How to get the students interested?

- Start class before class.
- Play music.
- Give students some control of what they are doing in the classroom.
- Open ended questions.
- Bring your life into the problem.
- Let them talk about it.
- Use math as a tool to find real world answers

Research Support

- From Scientific American

“A new study from the University of California, Davis, suggests that when our curiosity is piqued, changes in the brain ready us to learn not only about the subject at hand, but incidental information, too.”

How to get the students to figure things out?

- Let the students
 - make predictions
 - use a calculator
 - talk (Class Dojo)
 - choose their method (Afterwards show them the method you want them to use)
 - structured worksheet

Class structure

- Create interesting introduction
- Ask them to make predictions
- Work in groups of 2, 3 or 4.STRUCTURED!
- Students speak about their conclusions.

Writing in the classroom

- Know the quantities.
- Use the numbers as adjectives.
- Use complete sentences.
- Keep pronouns to a minimum. Avoid it.
- Describe the words in the activity that led them to the operator(s) (+, - ,/ or x).

STUDENT TIME

- Students are not used to thinking, writing and making meaning out of numbers.
- Not everything goes to plan and these activities take time for the students.

TEACHER TIME

- It takes about an hour to adjust lessons.
- Not all the time
- Donut shop!!
- Impromptu

Impromptu

- A 747 jet plane takes off and rises 1500 feet per minute until it rises to 10,000 feet. Make a table, graph and equation that describes this scenario.
- How can we make this problem interesting and understandable?
 - Start with a You Tube video of a plane flying
 - Play Drake song “Started From the Bottom”

Questions, Comments and Ideas

- richmath1@hotmail.com
- THANK YOU!!