

The College at Brockport: State University of New York Digital Commons @Brockport

Lesson Plans


CMST Institute

10-29-2004

Using Sales to Understand Math Concepts with TI Calculator

Thomas DeMond
The College at Brockport

Follow this and additional works at: http://digitalcommons.brockport.edu/cmst_lessonplans

 Part of the [Physical Sciences and Mathematics Commons](#), and the [Science and Mathematics Education Commons](#)

Repository Citation

DeMond, Thomas, "Using Sales to Understand Math Concepts with TI Calculator" (2004). *Lesson Plans*. 224.
http://digitalcommons.brockport.edu/cmst_lessonplans/224

This Lesson Plan is brought to you for free and open access by the CMST Institute at Digital Commons @Brockport. It has been accepted for inclusion in Lesson Plans by an authorized administrator of Digital Commons @Brockport. For more information, please contact kmayers@brockport.edu.

--

For your **TI Technologies** lesson and using the following prompts, please provide a rich **one-page, single-spaced** description or a *vision* of your best thinking on a way or ways you might teach the planned lesson using the TI technology. Pay special attention to the modeling package in your description. Also, construct and submit a tentative rubric that you might use with your students. ** see example page 5

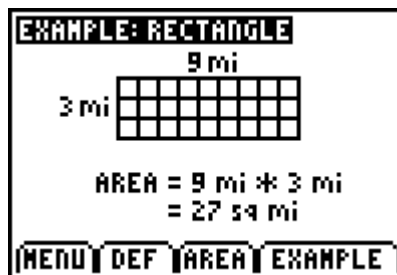
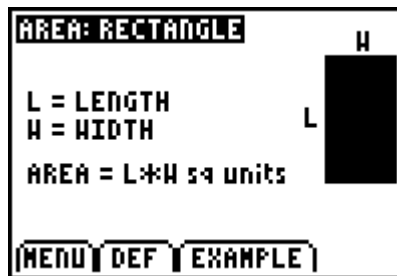
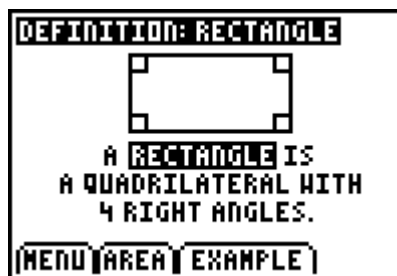
Target	Does not meet standard	Meets Standard	Exceeds Standard	
Student programs TI-84 Calc to derive the answer				
Student uses Calc to learn about The subject				
Student can describe problem				
Student accomplishes lesson objective				
	0	1	2	

“...a rich **one-page, typed, single-spaced**, description or a *vision* of your best thinking...”

Prompts:

1. How will you assess the prior knowledge of the student?
2. How will you begin the lesson?
3. What are the teacher and students doing every 5-10 minutes? (Teacher Actions and Student Actions)
4. How will you assess the learning for the lesson?
5. How will TI be integrated into your teaching? (i.e. you may want to discuss a problem or describe how you might use the chosen modeling package in your plan. How does the model/tool help the concept(s) to be taught)?

I was thinking about beginning the class with a background activation exercise and assessment by giving a pretest to assess what students know about area. Next, I would present a 10 – 15 minute demonstration of the basics of using area modeling software. I would demonstrate the area formulas application on the TI4 calculator. The class would view 6 geometric shapes in the following manner:



Next, students will work on the TI4 to explore area, by using the area formula software, and completing the area quiz. The aim of this practice and assessment is so that students would gain more confidence in using the software in a meaningful way.

```
abs(23*35)
      805.000
abs(23*35)*.45
      362.250
■
```

An extended lesson would involve making a list of variables (l, w) and have students then use the formula to generate a table of answers.

L1	L2	L3	1
0.000	0.000	0.000	
0.000	0.000	0.000	
0.000	0.000	0.000	
0.000	0.000	0.000	
0.000	0.000	0.000	
0.000	0.000	0.000	
0.000	0.000	0.000	
0.000	0.000	0.000	
0.000	0.000	0.000	
L1(1)=0			

L1	L2	L3	2
45.000	150.000	0.000	
27.000	146.00	0.000	
109.00	608.00	0.000	
78.000	159.00	0.000	
96.000	688.00	0.000	
123.00	192.00	0.000	
750.00	404.00	0.000	
L2(1)=150			

L3	L4	L5	3
6750.0	3037.5	-----	
3942.0	1773.9		
66272	29822		
12402	5580.9		
66048	29722		
23616	10627		
303000	136350		
L3(1)=6750			

Using Equation solver, I would first have students find the area for a list of lengths and widths. Then students would be expected to add in the cost factor (45 cents per square foot) and come up with a cost.

In the last example above, list L1 (length) and L2 (width) were multiplied to give List 3 (square footage). Then list L4 was computed by multiplying L3 x \$.45 to get the answer of \$3,037.50.

This data is easily calculated from the lists.

Student Assessment

Pre-test

Post Test (check one)

Use complete sentences to define the following words:

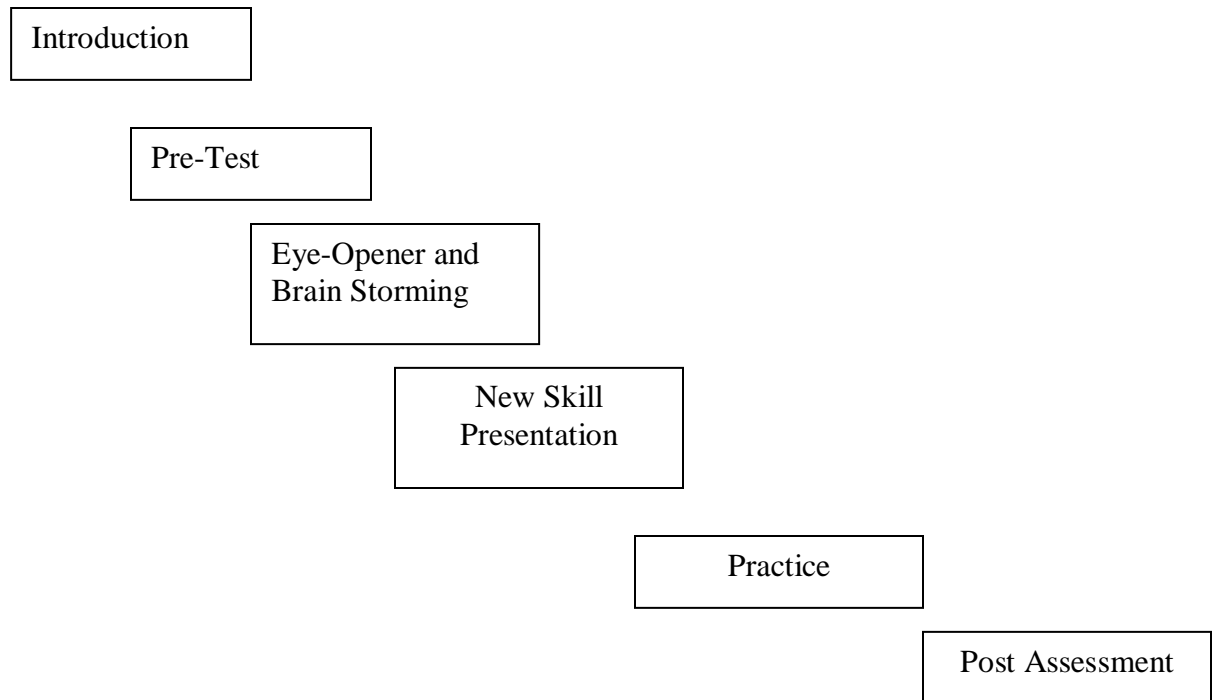
Rectangle
Square
Parallelogram
Trapezoid
Circle
Polygon

Write the formula for the area of a rectangle.

Write the formula for the area of a trapezoid.

If you measure a parcel of land, and the North side is 50 feet, South side – 75 feet, West side 60 feet, east side 75 feet, distance from north to south side is 50 feet. What is the area of the land.

Lesson Flow Chart



Flow Chart showing lesson parts.

Additional Objectives:

85% of the class will have an increased ability to use tool and method as evidenced by

- Pass post test
- Complete exercise
- Participate in lesson
- Use TI-84 calc to compute area by entering equation
- Use calc to complete Apps/AreaForm/area quiz successfully, after studying definitions and formulas.