

For Scorer Use Only: If this task has been administered using a modification that affects how it is scored, the teacher administering the task should describe which parts of the rubric will not be used below:



SCORE:	
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Certificate of Initial Mastery Task Booklet
2007–08 School Year

A Banner Idea

Mathematics
On-Demand Task 2.3.19

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Central Falls
Coventry
Johnston

Lincoln
Middletown
Pawtucket

West Warwick

Mathematics

A Banner Idea

On-Demand Task 2.3.19

2007–2008

Student Identification

Please PRINT your formal name and the additional information requested in the spaces below.

First Name																	
Last Name																	

Year of graduation				
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School															
Teacher															

	Month		Day		Year			
Today's Date			/			/		

Section 1. Task Conditions

To complete this task, the student:

- May use mathematical tools including calculators, textbooks, formula sheets, and notes.
- Must work alone.
- Must have one 90-minute class period or two 45-minute “on-task” periods to complete this task. Students are allowed about 10 additional minutes to complete their work if needed.
- Should read through the problem and the task criteria of the prompt to determine what is being asked of them before they attempt to answer any part. They may reread as needed. Make sure they understand to answer each question of the task.
- Should supply supporting evidence in each part of the task.
- Should use the π -key rather than the 3.14 rational approximation.
- Should round final answers according to each prompt, that is, use irrational values until the final step of the calculation process.
- Should thoroughly support calculator work (scientific or graphics) through written commentary or representations of their key strokes.

If students use additional paper, it should be stapled to the booklet. Only use the **booklet name and number** to identify the additional pages.

These directions should be followed unless a student requires accommodations in the way he/she takes this task. These accommodations should be related to student’s IEP, 504 Plan, PLP, or entering/beginning status as an English Language Learner. Before the student begins this task, you should discuss which of the accommodations in the box below the student requires.

In order to meet standard on this task, students cannot score a zero or a one on any section of the rubric.

Accommodations to Meet Special Needs

To the teacher: Describe any accommodations required by the student’s IEP, 504 Plan, PLP, or in relation to his/her entering/beginning status as an English Language Learner that you made in the way this task was administered:

Presentation/format: _____

Timing/scheduling: _____

Mode of response: _____

Environment/setting: _____

Scoring Modifications

Students with individual learning needs may require a **modification(s) in the way this task is scored**. (For example, a student with dyslexia might not be scored on the spelling component of the rubric.) These individual leaning needs should be described in the student’s IEP, 504 Plan, PLP, or in relation to the student’s entering/beginning status on the ACCESS Test for English Language Learners. If the way this task is scored should be modified, be sure to describe this modification in the box on the cover of the task.

Section 2. Task Criteria

This list of criteria describes what you need to do in order to Meet Standard on this task. You should pay attention to the Meets Standard column and be sure you understand what it says before you begin this task. In order to Meet Standard on this task, you cannot get a zero or a one on any expectation in this task.

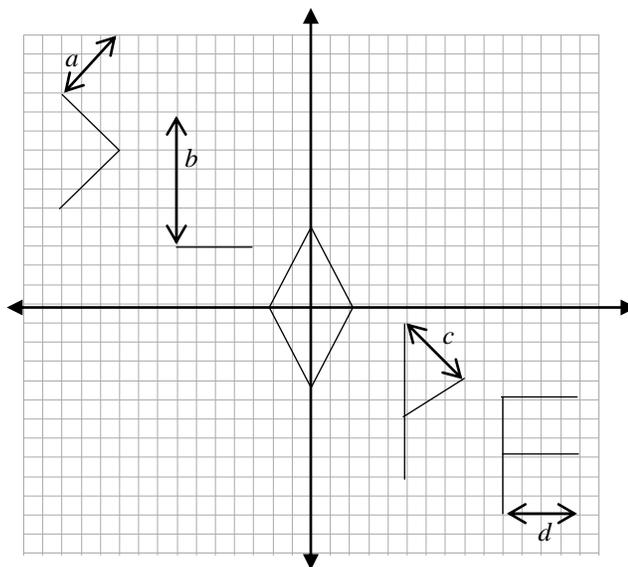
Your teacher should discuss these criteria with the class. Use the right-hand column to take notes, write down hints to yourself, things that seem important to you, or things that you do not want to forget.

Expectations	Meets Standard 3	Student Notes
Student works with slope on the coordinate plane. Questions 1a, 2a DOK 2	Student determines each slope. Work may contain a minor error(s) or lack detail. M (G&M) 10-9	
Student demonstrates conceptual understanding of linear relationships. Questions 1b, 2b DOK 2	Student determines an equation of each line. Work may contain a minor error(s) or lack detail. M (F&A) 10-2	
Student identifies, extends, and generalizes a variety of patterns (linear) represented by graphs to solve problems and demonstrates conceptual understanding of linear relationships. Question 3 DOK 3	Student creates a design that satisfies at least 5 of the given criteria. Work may contain a minor error(s) or lack detail. M (F&A) 10-1, 10-2	
Student works with slope on the coordinate plane. Questions 1a, 2a DOK 2	Student determines each slope. Work may contain a minor error(s) or lack detail. M (G&M) 10-9	

Section 3. Task Prompt

The math department wants to place three banners in each classroom. Two banners have already been purchased. You are asked to submit a design for the final “math” banner.

Banner #1



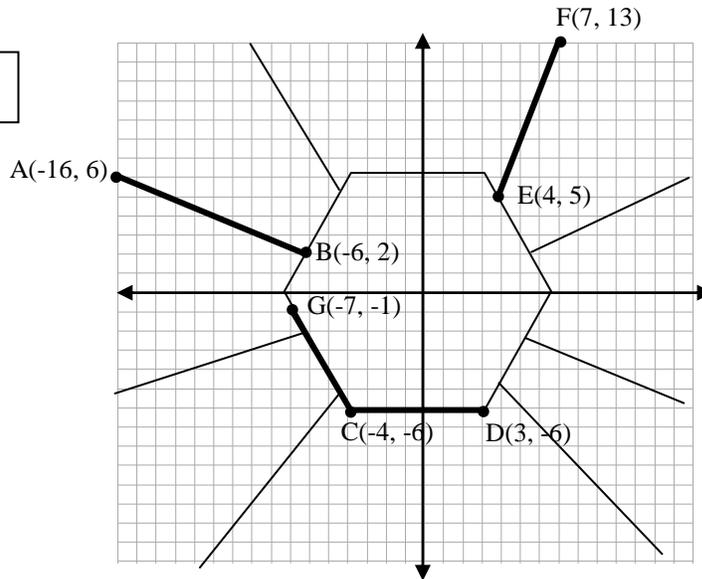
- 1a. Graphically determine the slope of lines a , b , c , and d . Show on the graph or describe how you determined each slope.

Line	Slope
a	
b	
c	
d	

- 1b. Determine an equation for line b and line c . Justify your equations verbally and/or graphically.

Line	Equation of the Line
b	
c	

Banner #2



2a. Algebraically determine the slope of \overline{AB} , \overline{GC} , \overline{CD} , and \overline{EF} . Show all work.

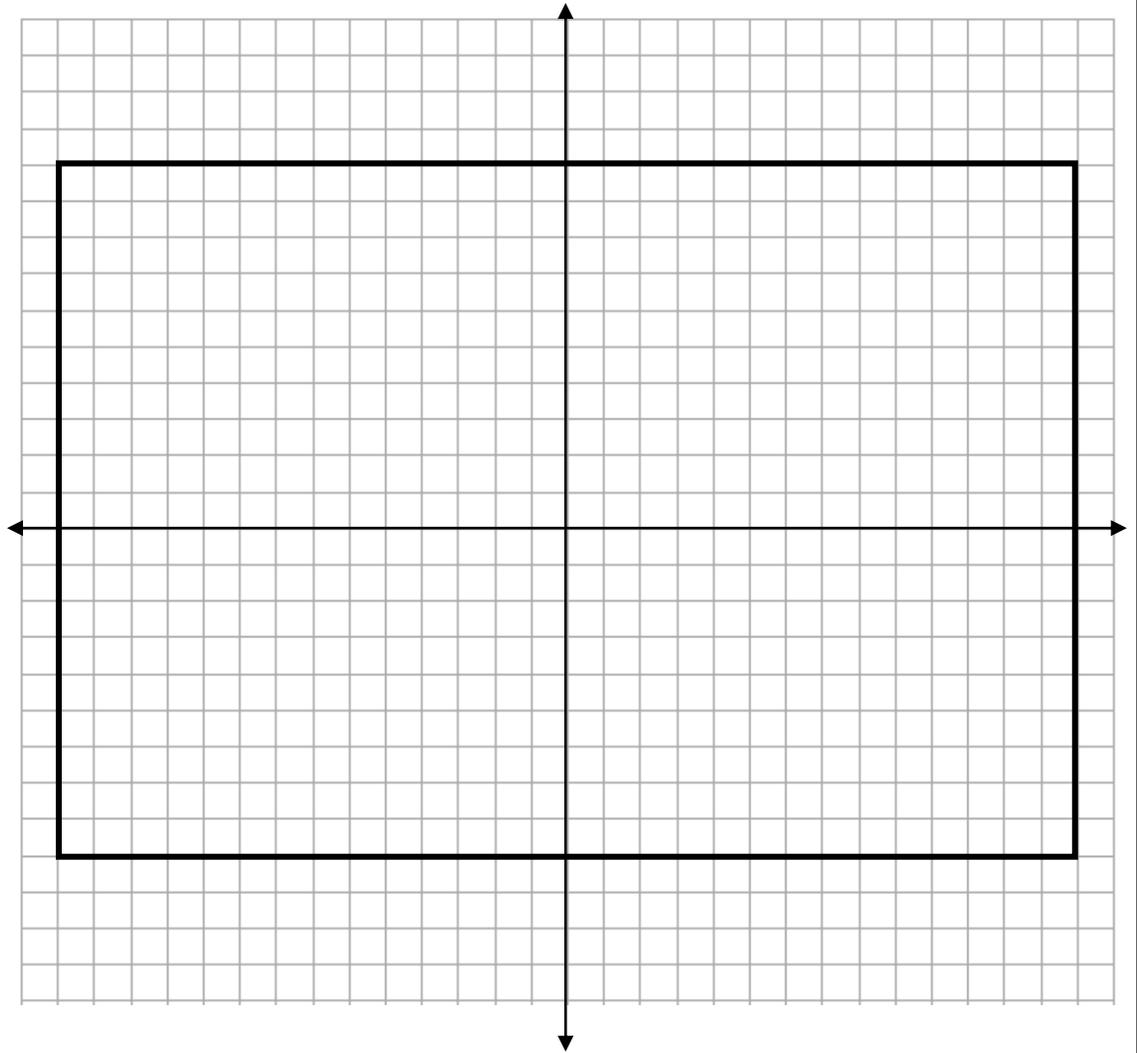
Segment	Slope
\overline{AB}	
\overline{GC}	
\overline{CD}	
\overline{EF}	

2b. Determine an equation for \overline{CD} and an equation for \overline{EF} . Be sure to specify the appropriate domain. Show all work.

Segment	Equation of the Line and Its Domain
\overline{CD}	
\overline{EF}	

3a. Create a design for the third banner using segments to spell out the word “MATH” within the bounded region according to the following criteria. The design must include:

- a segment with slope greater than one,
- a segment with slope less than zero,
- a segment with slope between zero and one,
- a segment with an undefined slope (no slope),
- a segment with a slope of zero,
- a set of parallel segments,
- a set of perpendicular segments.



3b. Justify that your banner meets all of the criteria through illustrations, mathematics, and/or written evidence.

- slope greater than one:

- slope less than zero:

- slope between zero and one:

- no slope (undefined slope):

- slope of zero:

- a set of parallel segments:

- a set of perpendicular segments:

Section 4. TASK RUBRIC: A Banner Idea

Scorer 1: Instructions to Scorer: Use a magic marker to highlight the portion of each row in the rubric that matches the student's performance. Highlight the column at the bottom that summarizes the overall performance.

Expectations	Exceeds standard 4	Meets standard 3	Nearly meets standard 2	Below standard 1	0
Student works with slope on the coordinate plane. Questions 1a, 2a DOK 2	Student correctly determines each slope. All supporting work is shown in detail.	Student determines each slope. Work may contain a minor error(s) or lack detail. M (G&M) 10–9	Student determines slope. Work contains an intrusive error or work is not provided.	Student makes an attempt. Work contains intrusive errors.	
Student demonstrates conceptual understanding of linear relationships. Questions 1b, 2b DOK 2	Student correctly determines an equation of each line. All supporting work is shown in detail.	Student determines an equation of each line. Work may contain a minor error(s) or lack detail. M (F&A) 10–2	Student determines an equation of each line. Work contains an intrusive error or work is not provided.	Student makes an attempt. Work contains intrusive errors.	
Student identifies, extends, and generalizes a variety of patterns (linear) represented by graphs to solve problems and demonstrates conceptual understanding of linear relationships. Question 3 DOK 3	Student creates a design that satisfies all the given criteria. All supporting work is shown in detail.	Student creates a design that satisfies at least 5 of the given criteria. Work may contain a minor error(s) or lack detail. M (F&A) 10–1, 10-2	Student creates a design that satisfies at least 3 of the given criteria. Work contains an intrusive error or work is not provided.	Student makes an attempt. Work contains intrusive errors.	

Comments _____

Score _____ Scorer's Initials _____

Section 4. TASK RUBRIC: A Banner Idea

Scorer 2: Instructions to Scorer: Use a magic marker to highlight the portion of each row in the rubric that matches the student's performance. Highlight the column at the bottom that summarizes the overall performance.

Expectations	Exceeds standard 4	Meets standard 3	Nearly meets standard 2	Below standard 1	0
Student works with slope on the coordinate plane. Questions 1a, 2a DOK 2	Student correctly determines each slope. All supporting work is shown in detail.	Student determines each slope. Work may contain a minor error(s) or lack detail. M (G&M) 10–9	Student determines slope. Work contains an intrusive error or work is not provided.	Student makes an attempt. Work contains intrusive errors.	
Student demonstrates conceptual understanding of linear relationships. Questions 1b, 2b DOK 2	Student correctly determines an equation of each line. All supporting work is shown in detail.	Student determines an equation of each line. Work may contain a minor error(s) or lack detail. M (F&A) 10–2	Student determines an equation of each line. Work contains an intrusive error or work is not provided.	Student makes an attempt. Work contains intrusive errors.	
Student identifies, extends, and generalizes a variety of patterns (linear) represented by graphs to solve problems and demonstrates conceptual understanding of linear relationships. Question 3 DOK 3	Student creates a design that satisfies all the given criteria. All supporting work is shown in detail.	Student creates a design that satisfies at least 5 of the given criteria. Work may contain a minor error(s) or lack detail. M (F&A) 10–1, 10-2	Student creates a design that satisfies at least 3 of the given criteria. Work contains an intrusive error or work is not provided.	Student makes an attempt. Work contains intrusive errors.	

Comments _____

Score _____ Scorer's Initials _____