

Rigor

Observing the Standards and Shifts

Adapting for Equity in High School

Leadership I - High School - Day 2



# Find the Rigor

## Protocol

1. Do the math.
2. For each, what aspects of rigor are emphasized and how do you know?
3. What are the grade-level standards associated with each one?

## Task #1

- a. Let  $F$  assign to each student in your math class his/her biological father. Explain why  $F$  is a function.
- b. Describe conditions on the class that would have to be true in order for  $F$  to have an inverse.
- c. In a case from part (b) in which  $F$  does not have an inverse, can you modify the domain so that it does?

## Task #2

John makes DVDs of his friend's shows. The cost of producing  $x$  DVDs is given by  $C(x)=2500+1.25x$ .

- a) John wants to cover his costs. Suppose John made 100 DVDs. What is the cost of producing this many DVDs? How much is this per DVD?
- b) Complete the table showing his costs at different levels of production.

| # of DVDs    | 0 | 10 | 100 | 1,000 | 10,000 | 100,000 | 1,000,000 |
|--------------|---|----|-----|-------|--------|---------|-----------|
| Total Cost   |   |    |     |       |        |         |           |
| Cost per DVD |   |    |     |       |        |         |           |

- c) Explain why the average cost per DVD levels off.
- d) Find an equation for the average cost per DVD of producing  $x$  DVDs.
- e) Find the domain of the average cost function.
- f) Using the data points from your table above, sketch the graph of the average cost function. How does the graph reflect that the average cost levels off?

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## Task #3

The expression  $3x^2 - 33x - 180$  can be factored into the form  $a(x + b)(x + c)$ , where  $a$ ,  $b$ , and  $c$  are constants, to reveal the zeros of the function defined by the expression. What are the zeros of the function defined by  $3x^2 - 33x - 180$ ?

Select **all** that apply.

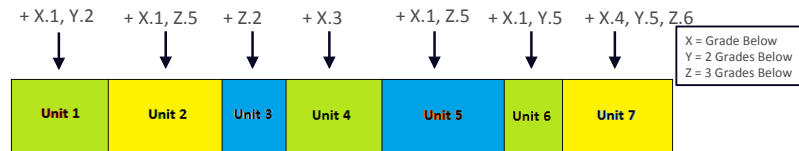
- Ⓐ -15
- Ⓑ -10
- Ⓒ -6
- Ⓓ -4
- Ⓔ 4
- Ⓕ 6
- Ⓖ 10
- Ⓗ 15

# The Adaptation Process

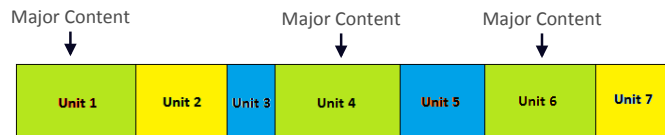
## ADAPTATIONS FOR STRUGGLING LEARNERS

### Adaptation Process: Scope and Sequence

Use the progressions to **add prerequisite standards from prior grades to all units.**



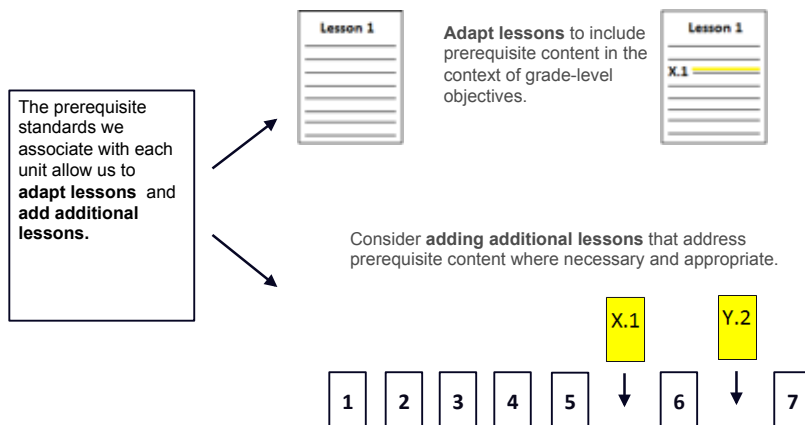
Consider **expanding focus on major content** where necessary.



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## ADAPTATIONS FOR STRUGGLING LEARNERS

### Adaptation Process: Lessons



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