ABE Math Curriculum Matrix Part 1

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Activity Book

Institute for the Professional Development of Adult Educators

WEBINAR ACTIVITY BOOK

ABE Math Curriculum Matrix Part 1

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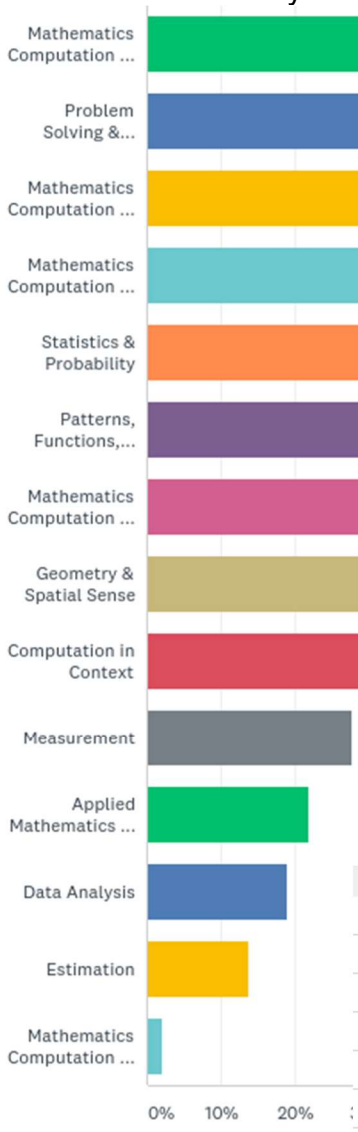
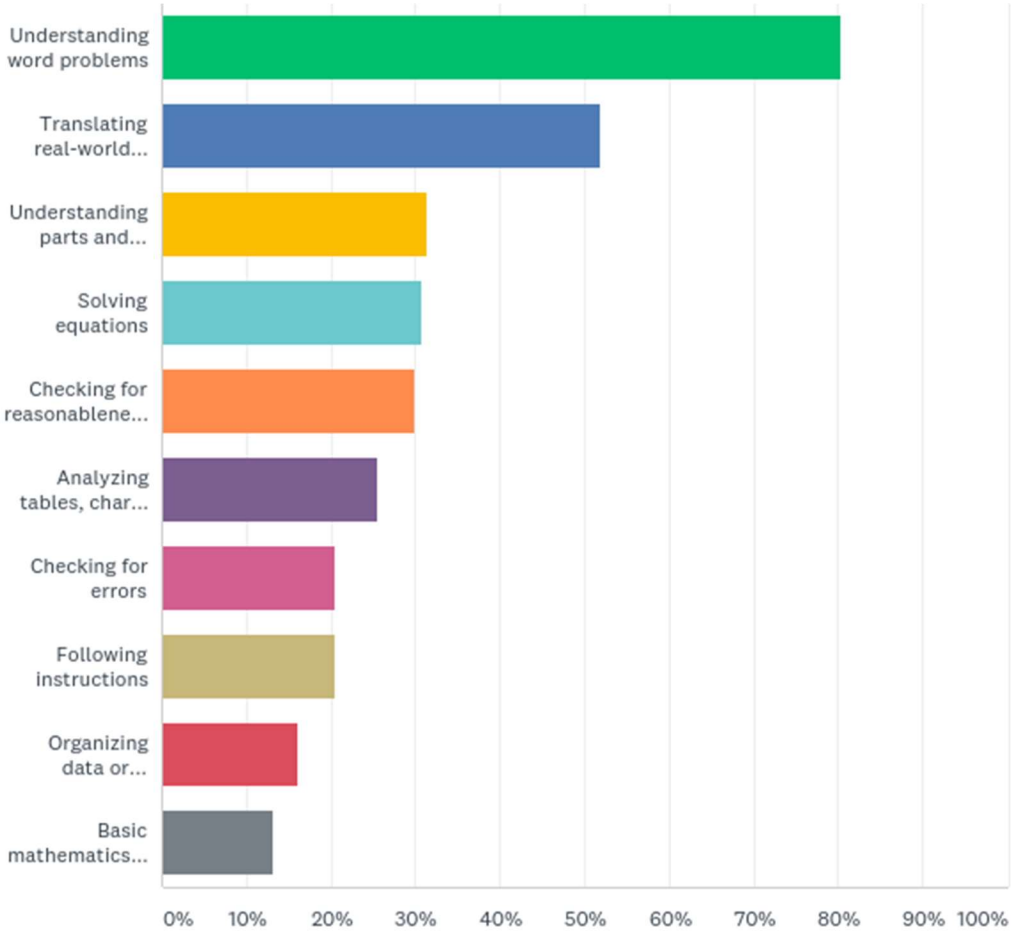
Survey Data

1. Based on your observations of your overall student performance data, which of the following areas of the TABE test are your students demonstrating the lowest performance? You may select more than one answer in this question.



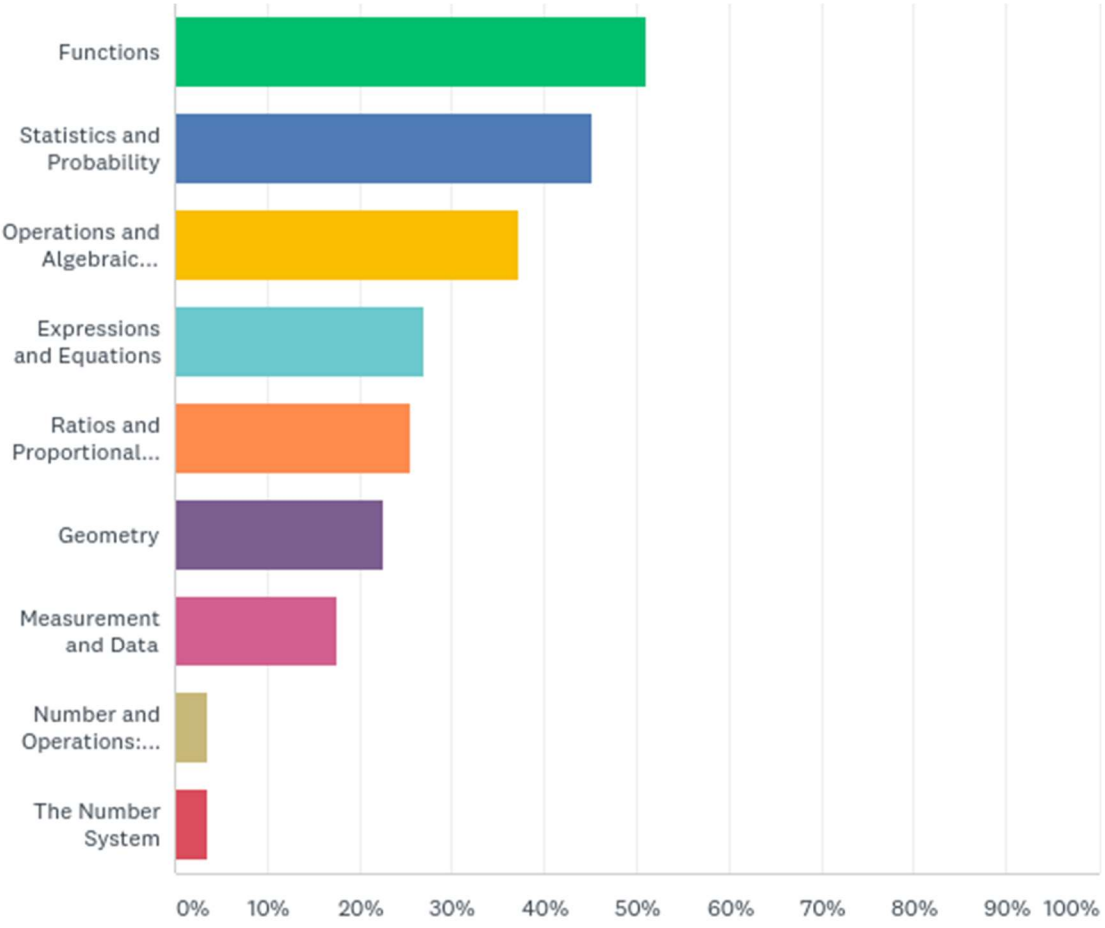
ANSWER CHOICES	RESPONSES	
Mathematics Computation – Fractions	70.07%	96
Problem Solving & Reasoning	55.47%	76
Mathematics Computation – Algebraic Operations	54.01%	74
Mathematics Computation – Decimals and Percents	51.82%	71
Statistics & Probability	49.64%	68
Patterns, Functions, Algebra	44.53%	61
Mathematics Computation – Integers	39.42%	54
Geometry & Spatial Sense	35.77%	49
Computation in Context	31.39%	43
Measurement	27.74%	38
Applied Mathematics in Number & Number Operations	21.90%	30
Data Analysis	18.98%	26
Estimation	13.87%	19
Mathematics Computation – Whole Numbers	2.19%	3
Total Respondents: 137		

2. Based your observations of your students' performance in class, which mathematics practice or skill is MOST challenging for students? You may select more than one answer in this question.



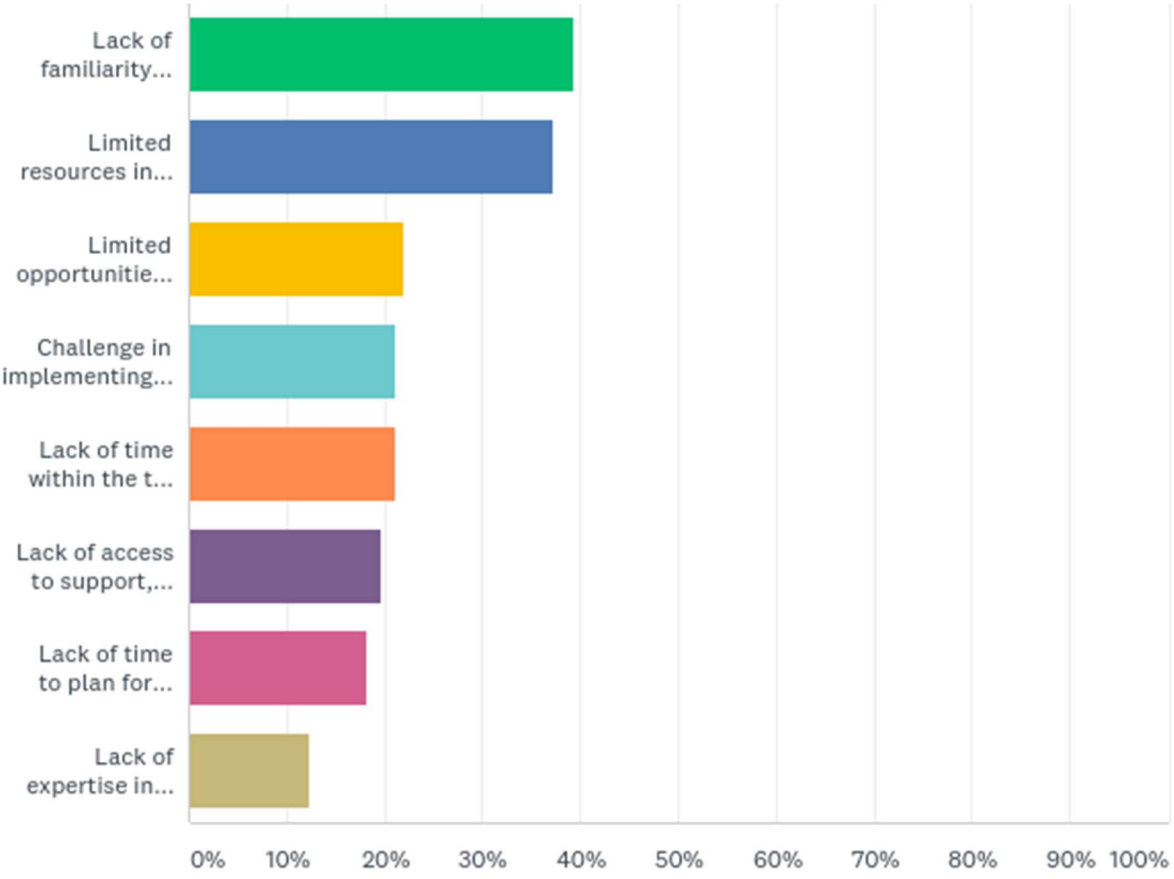
ANSWER CHOICES	RESPONSES	
Understanding word problems	80.29%	110
Translating real-world situations to equations	51.82%	71
Understanding parts and relationships between geometric figures	31.39%	43
Solving equations	30.66%	42
Checking for reasonableness of answers	29.93%	41
Analyzing tables, charts and graphs	25.55%	35
Checking for errors	20.44%	28
Following instructions	20.44%	28
Organizing data or completing data	16.06%	22
Basic mathematics computations and number sense	13.14%	18
Total Respondents: 137		

3. In your experience, which of the following Mathematical domains are MOST challenging to teach? You may select more than one answer in this question.



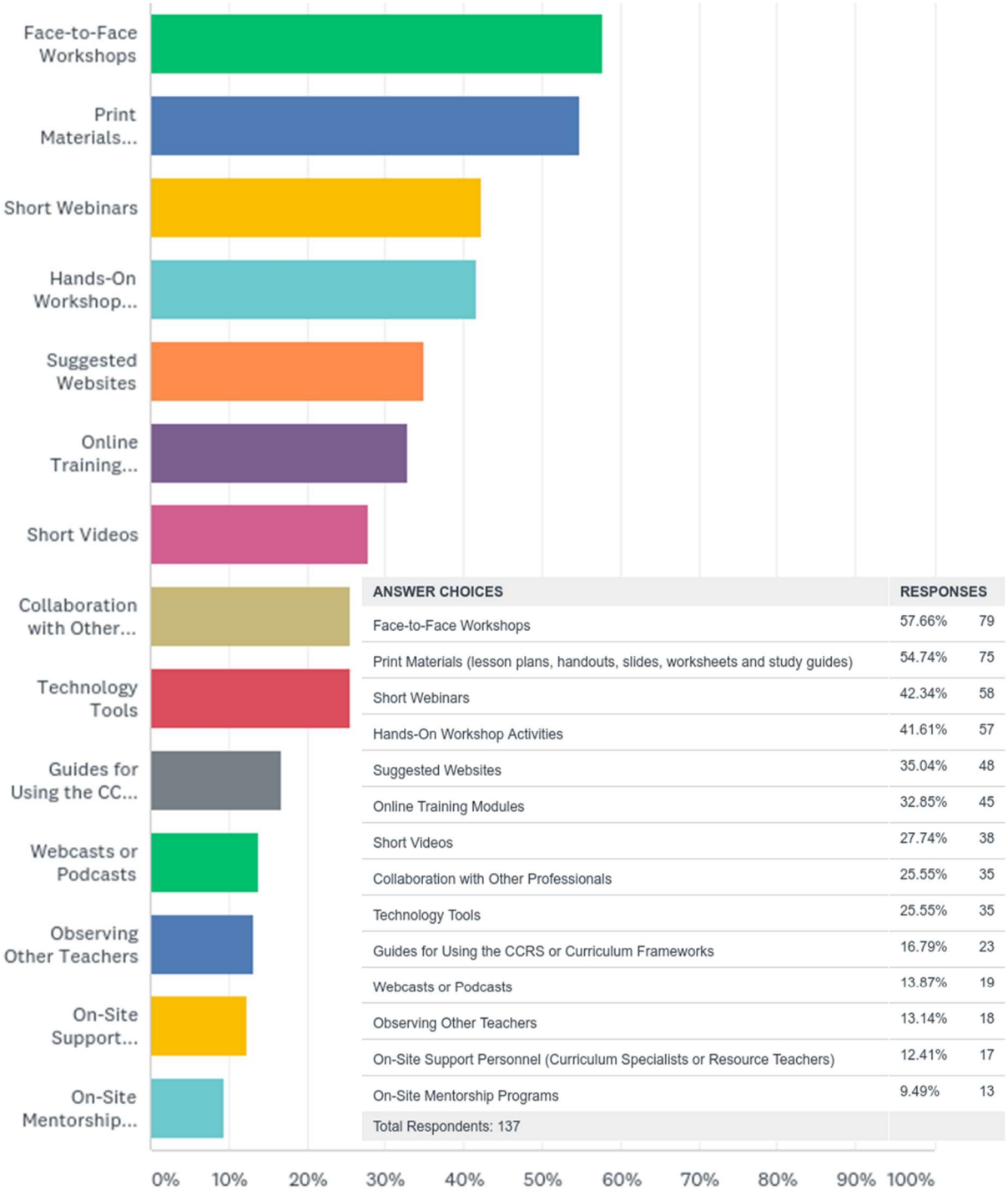
ANSWER CHOICES	RESPONSES	
Functions	51.09%	70
Statistics and Probability	45.26%	62
Operations and Algebraic Thinking	37.23%	51
Expressions and Equations	27.01%	37
Ratios and Proportional Relationships	25.55%	35
Geometry	22.63%	31
Measurement and Data	17.52%	24
Number and Operations: Base Ten	3.65%	5
The Number System	3.65%	5
Total Respondents: 137		

4. Based on your answer in Question 3, why? Or what factors do you think is impacting your response to Question 3? You may select more than one answer in this question.



ANSWER CHOICES	RESPONSES	
Lack of familiarity with the subject matter	39.42%	54
Limited resources in the subject matter such as books, technology, lesson plans, manipulatives and/or worksheets	37.23%	51
Limited opportunities to practice strategies learned from professional development	21.90%	30
Challenge in implementing the College and Career Readiness Standards and the Curriculum Frameworks	21.17%	29
Lack of time within the term to cover this topic	21.17%	29
Lack of access to support, training or professional development in the subject matter	19.71%	27
Lack of time to plan for lessons	18.25%	25
Lack of expertise in planning lessons aligned to the standards	12.41%	17
Total Respondents: 137		

5. Which aspects of professional development do you think best supports your work in the classroom to implement the College and Career Readiness Standards and the Curriculum Frameworks? You may select more than one answer in this question.



ANSWER CHOICES	RESPONSES	
Face-to-Face Workshops	57.66%	79
Print Materials (lesson plans, handouts, slides, worksheets and study guides)	54.74%	75
Short Webinars	42.34%	58
Hands-On Workshop Activities	41.61%	57
Suggested Websites	35.04%	48
Online Training Modules	32.85%	45
Short Videos	27.74%	38
Collaboration with Other Professionals	25.55%	35
Technology Tools	25.55%	35
Guides for Using the CCRS or Curriculum Frameworks	16.79%	23
Webcasts or Podcasts	13.87%	19
Observing Other Teachers	13.14%	18
On-Site Support Personnel (Curriculum Specialists or Resource Teachers)	12.41%	17
On-Site Mentorship Programs	9.49%	13
Total Respondents: 137		

Reflection:

Based on the data that you have seen, what do you think are the implications of this data to your own practice?

_____
_____
_____
_____
_____

How do your responses to these questions rank up to the rest of the teachers who took this survey? Explain why yours is the same or different than the results of the survey?

_____
_____
_____
_____
_____

Are there other needs that you have in the classroom that you want to communicate to your school administration? How will you proceed about doing this?

_____
_____
_____
_____
_____

ABE Mathematics Domains

ADULT BASIC EDUCATION MATHEMATIC DOMAINS					
Domain Number	**NRS Reporting Grade Equivalent (GE)**	**NRS Level 1 0.0 – 1.9**	**NRS Level 2 2.0 – 3.9**	**NRS Level 3 4.0 – 5.9**	**NRS Level 4 6.0 – 8.9**
1	Number and Operations: Base Ten	0.0 – 1.9	2.0 – 3.9	4.0 – 5.9	
2	Operations and Algebraic Thinking	0.0 – 1.9	2.0 – 3.9	4.0 – 5.9	
3	Measurement and Data	0.0 – 1.9	2.0 – 3.9	4.0 – 5.9	
4	Geometry	0.0 – 1.9	2.0 – 3.9	4.0 – 5.9	6.0 – 8.9
5	Number and Operations: Fractions		*3.0 – 3.9	4.0 – 5.9	
6	Expressions and Equations			4.0 – 5.9	6.0 – 8.9
7	The Number System			4.0 – 5.9	6.0 – 8.9
8	Ratios and Proportional Relationships			4.0 – 5.9	6.0 – 8.9
9	Statistics and Probability			4.0 – 5.9	6.0 – 8.9
10	Functions				*7.0 – 8.9

Questions:

Which domain(s) span all 4 levels of ABE?

_____
_____
_____

Which domain(s) span only a single level of ABE?

_____
_____
_____

At what grade level are the standards for Ratio and Proportional Relationships taught?

_____
_____
_____

The ABE Mathematics Standards

Instructions:

Label the diagram below by drawing an arrow from each component of the standards to the table to the right.

MATHEMATICS (MA) Basic Literacy GE: 0.0-3.9 Anchor Standards and Benchmark Skills	
NRS LEVEL 1 **GE: 0.0 – 1.9**	**NRS LEVEL 2** **GE: 2.0 – 3.9**
CCR.MA.ABE.1. **Number and Operations: Base Ten**	
1.1 Understand place value of two-digit numbers. a) Understand that the two digits of a two-digit number represent amounts of tens and ones. b) Compare two two-digit numbers recording the results of comparisons with the symbols greater than (>), equal to (=), and less than (<).	**2.1 Understand place value of three-digit numbers.** a) Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones. b) Count within 1000 by 5s, 10s, and 100s. c) Read and write numbers to 1000 using numerals, number names, and expanded form. d) Compare two three-digit numbers using greater than (>), equal to (=), and less than (<) symbols to record the results of comparisons.

- ABE Level
- Domain
- Anchor Standards
- Benchmarks

The ABE Mathematics Curriculum Matrix

Instructions:

List the steps on how to download the electronic copy of the ABE Mathematics Curriculum Matrix from the IPDAE Website.

_____
_____
_____
_____
_____

Reflection Question:

How would you use the ABE Mathematics Curriculum Matrix in your ABE/GED/ESOL Classroom?

_____
_____
_____
_____
_____

Questions:

What are the benefits of using the ABE Mathematics Curriculum Matrix to you as a teacher/administrator?

_____
_____
_____
_____
_____

What are the benefits of using the ABE Mathematics Curriculum Matrix to your students?

_____
_____
_____
_____
_____

List the various characteristics of the ABE Mathematics Curriculum Matrix.

_____
_____
_____
_____
_____

List down the different applications of the ABE Mathematics Curriculum Matrix?

_____
_____
_____
_____
_____

Applications

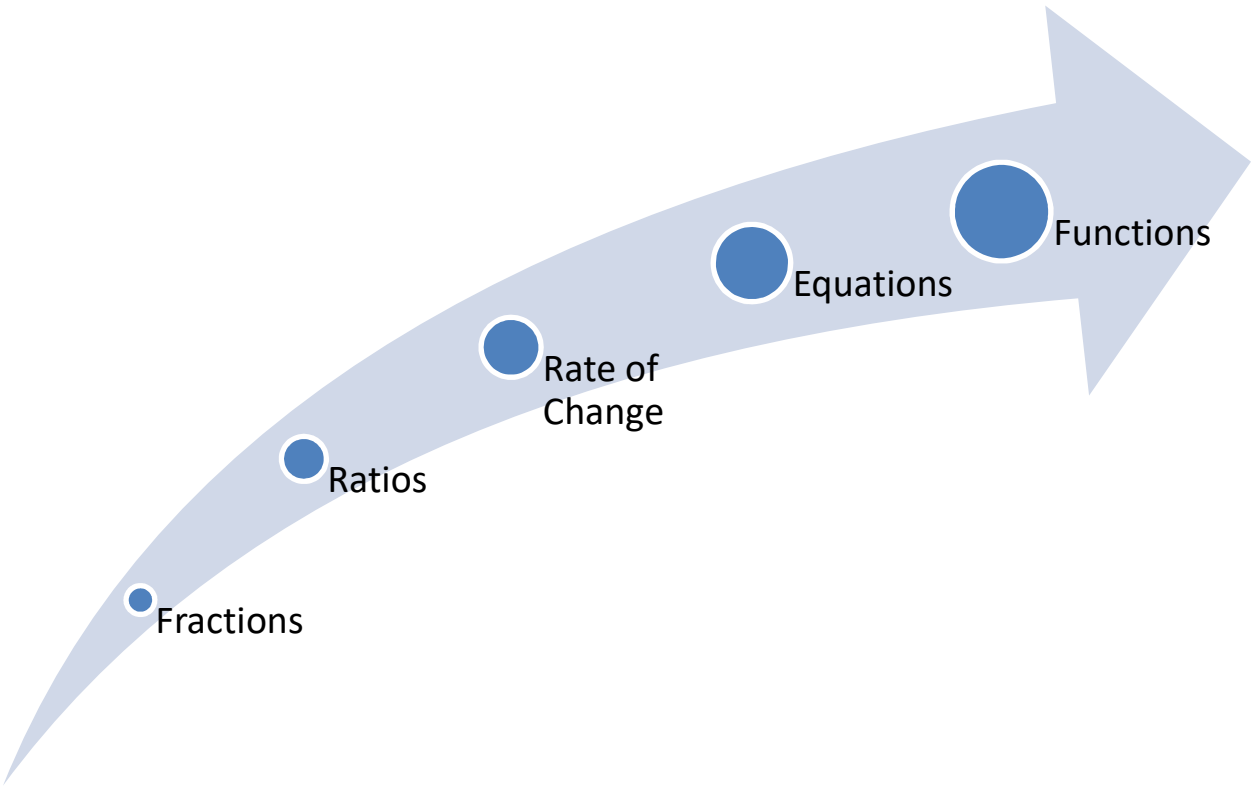
Question:

Using a section of the ABE Mathematics Curriculum Matrix below, in what sequence would you teach these topics? Explain.

Domain	NRS Level 1	
1. Number and Operations: Base Ten	Place Value of 2-Digit Numbers	Add and Subtract 2-Digit Numbers
	Compare 2-Digit Numbers	Model Addition and Subtraction of 2-Digit Numbers
2. Operations and Algebraic Thinking	Solve Addition and Subtraction Problems within 20	The Equal Sign
	Commutative and Associative Property of Addition	Solving Addition and Subtraction Equations

Use the section below to answer the question.

Learning Trajectories



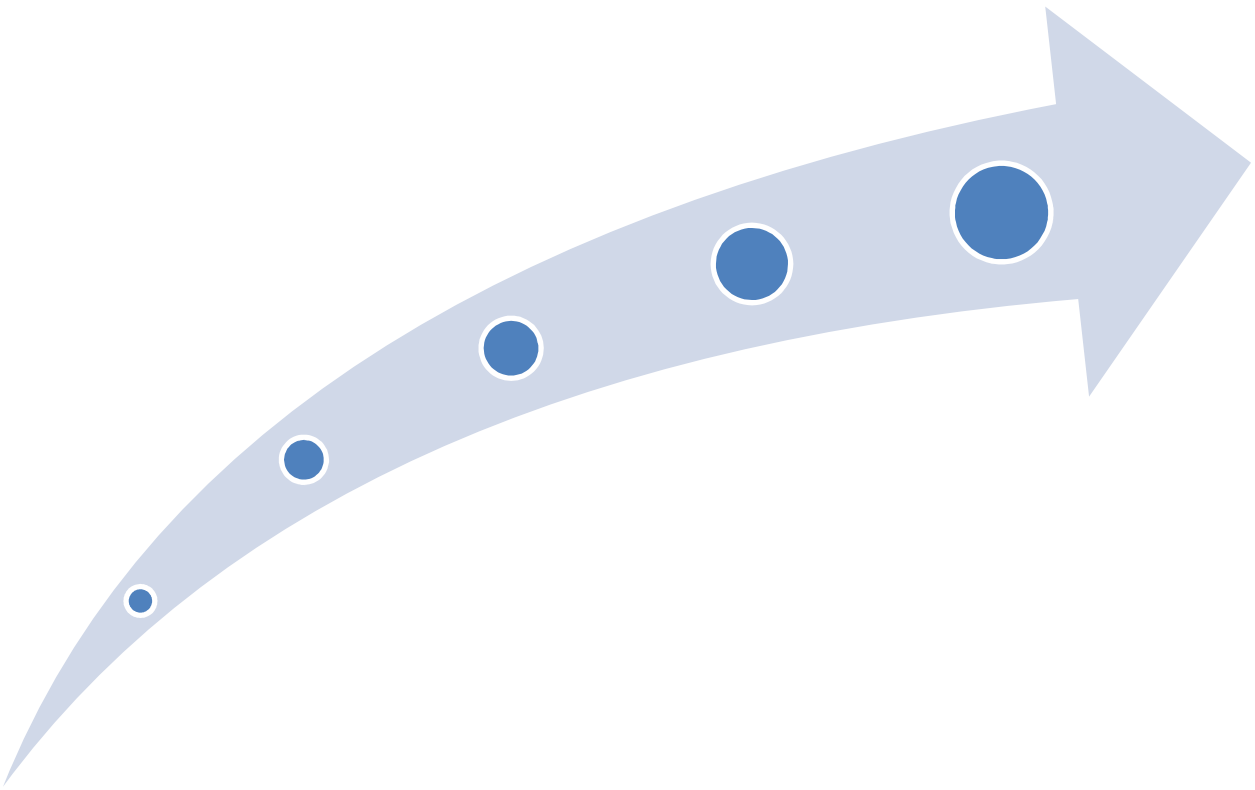
Questions:

What is a learning trajectory?

_____
_____
_____
_____
_____

Activity:

Use the ABE Mathematics Curriculum Matrix to identify another learning trajectory. Label the diagram below with the sequential topics. You may add additional bullets if you need more to complete your learning trajectory.



High Impact Indicators

All of the indicators listed in the GED® Assessment Target indicators describe the critical thinking skills essential to test-taker success in college, career training, and the workforce. However, those we are highlighting in the **High Impact Indicators** may be useful for educators to emphasize in their instruction.

We selected the following skills as High Impact Indicators because:

- They represent particular **foundational skills** that are the basis for the development of other skills covered in the GED® Assessment Targets and have **broad usefulness** that can be applied in multiple contexts.
- They are a **good fit for classroom instruction** because they are not complicated but are important for students to know and use.
- GED® testing data suggests that **educators may not be currently focusing on these skills** in their GED® test preparation.

While focused classroom instruction on these High Impact Indicators may quickly and positively impact your students' test performance, **educators should note that the High Impact Indicators are not more important than the rest of the indicators.** Proficiency with all of the indicators is essential for test-takers to perform well on the GED® test.

Questions:

What are High Impact Indicators?

_____
_____
_____
_____
_____

Why is it important for teachers to teach these High Impact Indicators?

_____
_____
_____
_____
_____