

What do we want our students to learn?

## 4.2B

## QUESTION 1

- 4.2B- represent the value of the digit in whole numbers through 999,999 ~~1,000,000,000~~ and ~~decimals to the hundredths~~ using expanded notation and numerals.
- **Represent** using Expanded Form, Standard Form, Word Form and Expanded Notation.
- We will represent the value of digits in a whole number using expanded form, standard form, word form and expanded notation.
  
- Classroom quick checks
- Desmos-
- Expanded notation- [Click here](#)
- Common formative assessments (CFAs)
- Summative assessment

What questions will we ask to challenge students' thinking?

## INCREASE THE RIGOR

Generate 3 to 4 high-level questions to deepen students' level of thought and understanding of the content.

- What connections do you see between the value of a number when represented in expanded form and expanded notation?
- How do the different representations show the value of a digit? The value of the number?
- How could you represent a six digit number in a variety of ways?

What do we want our students to learn?

4.4A

QUESTION 1

4(4)(A)\* add and subtract whole numbers ~~and decimals to the hundredths place~~ using the standard algorithm.

- **Add** and **subtract** whole numbers with and without regrouping
- We will **add** and **subtract** whole numbers with and without regrouping using the standard algorithm.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

Generate 3 to 4 high-level questions to deepen students' level of thought and understanding of the content.

- How is the standard algorithm similar to other addition and subtraction strategies that you have used before?
- How are the place values represented in the standard algorithm?
- How did your partner solve their problem? Do you agree that their strategy works?

what do we want our students to learn?

## 4.5A UNIT

QUESTION 1

- 4.5(A) represent multi-step problems involving addition and subtraction ~~the four operations~~ with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity.
- **Represent** word problems with strategies such as strip diagrams and equations
- We will **represent** multi-step word problems involving addition and subtractions using strip diagrams and equations.

what questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

Generate 3 to 4 high-level questions to deepen students' level of thought and understanding of the content.

- How does the strip diagram represent the knowns and unknowns of the problem?
- Is there a more efficient way to represent the word problem?
- How could you defend your strip diagram/equation?

what do we want our students to learn?

## 4.5A UNIT

QUESTION 1

- 4.5(A) represent multi-step problems involving addition and subtraction ~~the four operations~~ with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity.
- **Represent** word problems with strategies such as strip diagrams and equations
- We will **represent** multi-step word problems involving addition and subtractions using strip diagrams and equations.

what questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

Generate 3 to 4 high-level questions to deepen students' level of thought and understanding of the content.

- How does the strip diagram represent the knowns and unknowns of the problem?
- Is there a more efficient way to represent the word problem?
- How could you defend your strip diagram/equation?

What do we want our students to learn?

4.4H

QUESTION 1

- 4(4)(H)\* solve with fluency one- and two-step problems involving multiplication and or division
- **Solve** multistep word problems with strategies involving multiplication and division without remainders.
- We will **solve** multi-step word problems involving multiplication and division using various strategies.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

Generate 3 to 4 high-level questions to deepen students' level of thought and understanding of the content.

How do you know whether a word problem is one step versus multi step?

How do you know difference between an addition word problem versus a multiplication word problem?

How do you know difference between a subtraction word problem versus division word problem?

Are you combining groups or separating groups into equal sized groups?

what do we want our students to learn?

4.5B

QUESTION 1

4(5)(B)\* represent problems using an input-output table and numerical expressions to generate a number pattern that follows a given rule representing the relationship of the values in the resulting sequence and their position in the sequence.

- **Represent** an input output table with an expression or equation to create a pattern.
- We will **represent** Input-output tables with an equation or an expression to create a pattern.

what questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

Generate 3 to 4 high-level questions to deepen students' level of thought and understanding of the content.

What is the relationship between the input (position) and the output (value)?

What is the rule for this input-output table?

What is the difference between representing an input output table with an expression vs an equation?

What do we want our students to learn?

4.8C

QUESTION 1

4(8)(C)\* solve problems that deal with measurements of ~~length~~, intervals of time, ~~liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate.~~

- **Solve** problems that deal with intervals of time.
- We will **solve** problems involving intervals of time using number lines.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

Generate 3 to 4 high-level questions to deepen students' level of thought and understanding of the content.

- How can you use a number line to determine the elapsed time?
- How can you convert minutes to hours?
- How can you convert hours to minutes?

What do we want our students to learn?

4.2B

QUESTION 1

- 4.2B- represent the value of the digit in whole numbers through 999,999 1,000,000
- ~~and decimals to the hundredths~~ using expanded notation and numerals.
- **Represent** using Expanded Form, Standard Form, Word Form and Expanded Notation.
- We will represent the value of digits in a whole number using expanded form, standard form, word form and expanded notation.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

Generate 3 to 4 high-level questions to deepen students' level of thought and understanding of the content.

- What connections do you see between the value of a number when represented in expanded form and expanded notation?
- How do the different representations show the value of a digit? The value of the number?
- How could you represent a nine digit number in a variety of ways?



What do we want our students to learn?

4.4H

QUESTION 1

- 4(4)(H)\* solve with fluency one- and two-step problems involving multiplication and or division, including interpreting remainders.
- **Solve** multistep word problems with strategies involving multiplication and division with remainders.
- We will **solve** multi-step word problems involving multiplication and division using various strategies.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

How do you know whether a word problem is one step versus multi step?

Are you combining groups or separating groups into equal sized groups?

Is the answer the remainder?

Does the remainder impact the answer?

Is the whole number a quotient plus 1?

Is the answer the remainder?

What do we want our students to learn?

4.3D

QUESTION 1

4(3)(D) Compare two fractions with different numerators and different denominators and represent the comparison using the symbols  $>$ ,  $=$ , or  $<$ .

- **Compare**-fractions with with different numerators and denominators
- **Represent** a fraction comparison sentence with symbols  $<$ ,  $>$ ,  $=$

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

- Which number is closest to zero? Closest to one?
- What do you notice about the size of the pieces of the model partitioned into \_\_\_\_\_ compared to the size of the pieces of the model partitioned into \_\_\_\_\_?
- How did you determine which fraction was the greater fraction?
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What do we want our students to learn?

**4.3E**

QUESTION 1

4(3)(E) Represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations.

- **Represent and solve** addition and subtraction of fractions with pictorial model and number lines.
- We will **represent and solve** addition and subtraction of fractions with equal denominators using objects and pictorial models.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

- How did you determine the sum of \_\_\_\_\_ and \_\_\_\_\_?
- How did you determine the difference between \_\_\_\_\_ and \_\_\_\_\_?
- How can you use a pictorial model to determine the solution?
- How is a strip diagram similar to a number line?

What do we want our students to learn?

4.6D

QUESTION 1

4(6)(D) classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size.

- **Classifying** two-dimensional figures based on types of lines and angles.
- We will **classify** figures based on the presence or absence of attributes.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

- How can you define \_\_\_\_\_ in your own words? (a point, a ray, a line, a line segment, parallel lines, perpendicular lines, etc.)
- How can you determine if the sides of a polygon are perpendicular? Parallel?
- Does this figure have \_\_\_\_\_ sides? How do you know?
- Does this figure have \_\_\_\_\_ angles? How do you know?
- How could we classify this group of polygons?

What do we want our students to learn?

4.7C

QUESTION 1

4(7)(C) determine the approximate measures of angles in degrees to the nearest whole number using a protractor.

- **Determine** the measures of angles with a protractor.
- **Estimate** to the nearest whole number degree of a given angle.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

How can classifying the angle before measuring help you determine its measure?

How do you know your angle measurement is reasonable?

How can you determine the measurement of an angle that does not have a ray aligned to the zero degree mark of a protractor?

How can you determine which scale to use on the protractor?

What do we want our students to learn?

4.4A

QUESTION 1

4(4)(A)\* add and subtract whole numbers ~~and decimals to the hundredths place~~ using the standard algorithm.

- **Add** and **subtract** whole numbers with and without regrouping
- We will **add** and **subtract** whole numbers with and without regrouping using the standard algorithm.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

Generate 3 to 4 high-level questions to deepen students' level of thought and understanding of the content.

- How is the standard algorithm similar to other addition and subtraction strategies that you have used before?
- How are the place values represented in the standard algorithm?
- How did your partner solve their problem? Do you agree that their strategy works?

What do we want our students to learn?

**4.5A**

QUESTION 1

4(5)(A)\* represent multi-step problems involving the four operations multiplication or division with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity.

- **Represent** word problems with strategies such as strip diagrams and equations
- We will **represent** multi-step word problems involving all four operations using strip diagrams and equations.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

- How does the strip diagram represent the knowns and unknowns of the problem?
- Is there a more efficient way to represent the word problem?
- How could you defend your strip diagram/equation?

What do we want our students to learn?

4.4H

QUESTION 1

- 4(4)(H)\* solve with fluency one- and two-step problems involving multiplication and or division, including interpreting remainders.
- **Solve** multistep word problems with strategies involving multiplication and division with remainders.
- We will **solve** multi-step word problems involving multiplication and division using various strategies.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

How do you know whether a word problem is one step versus multi step?

Are you combining groups or separating groups into equal sized groups?

Is the answer the remainder?

Does the remainder impact the answer?

Is the whole number a quotient plus 1?

Is the answer the remainder?



What do we want our students to learn?

**4.3E**

QUESTION 1

4(3)(E) Represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial models that build to the number line and properties of operations.

- **Represent and solve** addition and subtraction of fractions with pictorial model and number lines.
- We will **represent and solve** addition and subtraction of fractions with equal denominators using objects and pictorial models.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

- How did you determine the sum of \_\_\_\_\_ and \_\_\_\_\_?
- How did you determine the difference between \_\_\_\_\_ and \_\_\_\_\_?
- How can you use a pictorial model to determine the solution?
- How is a strip diagram similar to a number line?

What do we want our students to learn?

## 4.2B QUESTION 1

4(2)(B) represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals.

- **Represent** whole numbers and decimals using Expanded Form, Standard Form, Word Form and Expanded Notation.
- We will represent the value of digits in a whole numbers and decimals using expanded form, standard form, word form and expanded notation.

What questions will we ask to challenge students' thinking?

## INCREASE THE RIGOR

- What connections do you see between the value of a number when represented in expanded form and expanded notation?
- How do the different representations show the value of a digit? The value of the number?

what do we want our students to learn?

4.2G

QUESTION 1

4(2)(G) relate decimals to fractions that name tenths and hundredths.

- Understand the relationship between decimal and fractions.
- Classify tenths and hundredths.

what questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

- How are fractions and decimals related?
- How are the fraction \_\_\_\_\_ and decimal \_\_\_\_\_ related?
- How can you determine which part of the decimal is your whole and which is your part?

What do we want our students to learn?

4.4A

QUESTION 1

4(4)(A) add and subtract whole numbers and decimals to the hundredths place using the standard algorithm.

- **Add** and **subtract** whole numbers and decimals with and without regrouping
- We will **add** and **subtract** whole numbers and decimals with and without regrouping using the standard algorithm.

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

- How are the processes for adding and subtracting decimals and the processes for adding and subtracting whole numbers alike? How are they different?
- How can you calculate profit?
- How could you use estimation to determine if your solution is reasonable?

What do we want our students to learn?

4.3D

QUESTION 1

4(3)(D) Compare two fractions with different numerators and different denominators and represent the comparison using the symbols  $>$ ,  $=$ , or  $<$ .

- **Compare**-fractions with with different numerators and denominators
- **Represent** a fraction comparison sentence with symbols  $<$ ,  $>$ ,  $=$

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

- Which number is closest to zero? Closest to one?
- What do you notice about the size of the pieces of the model partitioned into \_\_\_\_\_ compared to the size of the pieces of the model partitioned into \_\_\_\_\_?
- How did you determine which fraction was the greater fraction?
-

What do we want our students to learn?

**4.9A**

QUESTION 1

4(9)(A) represent data on a frequency table, dot plot, or stem-and-leaf plot marked with whole numbers and fractions.

**Represent- data on frequency table, dot plot or stem and leaf plots**

**Mark plots with whole numbers and fractions.**

What questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

What information does the set of data represent?

How can a stem-and-leaf plot (dot plot, frequency table) help you organize a set of data?

What does it mean when a stem does not have a leaf?

What is the difference between a stem with no leaves and a stem with a leaf of zero? Justify your answer.

What information is given in the key? How did you use this information?

What does it mean when there are two ones listed next to the stem of two?

what do we want our students to learn?

4.5D

QUESTION 1

4(5)(D) solve problems related to perimeter and area of rectangles where dimensions are whole numbers.

Solve problems related to area and perimeter using whole numbers.

what questions will we ask to challenge students' thinking?

INCREASE THE RIGOR

What is area? What is Perimeter?

What are the attributes of a rectangle?

How can you determine the perimeter of a rectangle?

How can you determine the area of a rectangle?

What numerical expression can be used to determine the area of the rectangle?

What formula can you use to determine the area? The perimeter?

what do we want our students to learn?

## 4.8C

## QUESTION 1

4(8)(C) solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate.

what questions will we ask to challenge students' thinking?

## INCREASE THE RIGOR

How can you use the tables to help you convert the measurements?

How can you use the reference materials to complete each statement?

What process did you use to convert smaller units into larger units? Why?

What process did you use to convert larger units into smaller units? Why?

What is the relationship between \_\_\_\_\_ and \_\_\_\_\_?

What operation can you use to convert \_\_\_\_\_ to \_\_\_\_\_?