



PARCC Readiness

**What ALL Administrators - Teachers -
Parents - Students Must Know . . .**

What does PARCC stand for?

The Partnership for Assessment of Readiness
for College and Careers.

The Belief . . .

- Assessment should work as a tool for enhancing teaching and learning
- Fully aligned to the CCSS
- Ensure that every child is on a path to college and career readiness
- Provide parents and teachers with timely information to identify students who may be falling behind and need extra help

Required Assessments

- There are two required assessments set to deploy through PARCC for both mathematics and English Language Arts Literacy.
- What are they?

Performance Based Assessment

- Given after 75% of the school year
- Extended tasks, applications of concepts and skills
- ELA - Writing effectively when analyzing text; research simulation
- Math - Solving multi-step problems requiring abstract reasoning, precision, perseverance and strategic use of tools

End Of Year

- Given after 90% of the school year
- Innovative, short-answer items
- ELA - Reading comprehension
- Math - Short items that address both concepts and skills

Optional Assessments

- There are two optional assessments set to deploy through PARCC.
- What are they?

Optional Assessments (Non-Summative)

- Diagnostic Assessment
 - Flexible indicator of student knowledge and skills
 - Allows instruction, supports, and professional development to be tailored to improve student learning
- Mid-Year Assessment (Mirror PBA -50%)
 - Performance based items and tasks
 - Emphasis on hard to measure standards
 - Individual states may consider including as a core

Higher Expectations for PARCC

- ELA
 - Read sufficiently complex texts
 - Write effectively
 - Build and present knowledge through research
- Mathematics
 - Reason mathematically
 - Solve problems: content and mathematical practice
 - Model real world problems
 - Have fluency in mathematics

Important Information

- Spring Release Information . . .

Spring 2014 Release

The spring 2014 release will consist of Performance-Based Assessment tests in English Language Arts/Literacy and End-of-Year tests in mathematics.

What's available:

- Grades 3–11 Performance-Based Assessment tests for ELA
- Grades 3–8 End-of-Year tests for mathematics
- Algebra I, Geometry, and Algebra II End-of-Year tests for mathematics

Notes about scoring:

1. The spring 2014 release will *not* have scoring capability built into the tool. PARCC will provide answer keys and rubrics.
2. The PARCC English Language Arts/Literacy summative assessments will include one prose constructed response item for each of the tasks that appears on the Performance-Based Assessment component. Teachers can score the three prose constructed responses by looking at the draft. [Learn more about rubrics.](#)

Important Information

- Fall Release Information . . .

Fall 2014 Release

What's available:

- Grades 3–11 End-of-Year tests for ELA
- Grades 3–8 Performance-Based tests for mathematics
- Algebra I, Geometry, and Algebra II Performance-Based tests for mathematics

Notes about scoring:

1. The fall 2014 release will have scoring capability built into the tool. PARCC will also provide rubrics for the prose constructed responses.

Resources

- <http://www.parcconline.org/resources>
 - There are resources for educators, parents, and a link to the CCSS.
 - Parents
 - FAQ
 - Fact Sheet
 - PARCC Glossary
 - Overview PowerPoint
 - New Vision of Assessment Power Point

Resources

- Parent Resources
 - Expanding Access - A Parent's Guide
 - PARCC Field Test
 - FAQ
 - PARCC Tech Prep Week
 - Sample Test Questions

Resources

- Educators
 - Sample Test Questions
 - Sample Items
 - K-12 Resources
 - PARCC Model Content Frameworks
 - Non-Summative Assessments
 - Educational Leader Cadres
 - Professional Learning Modules
 - Expanding Access - A Teacher's Guide

Resources

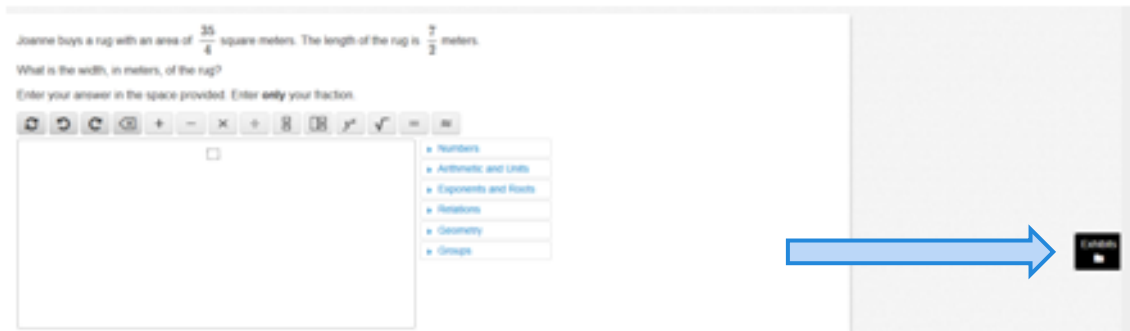
- www.marlboro.k12.nj.us
 - Curriculum Tab
 - PARCC Important Information
 - PARCC End of Year Mathematics Explanation Videos narrated by Dr. Eric Hibbs, Superintendent

Tools Within PARCC

- The following slides highlight the tools that are available in the PARCC framework.

Exhibits

- On every test question (Grade 6-8) on the right side will be a folder labeled “Exhibits.”
- This will contain a reference sheet for you.



Joanne buys a rug with an area of $\frac{35}{4}$ square meters. The length of the rug is $\frac{7}{2}$ meters.
What is the width, in meters, of the rug?
Enter your answer in the space provided. Enter **only** your fraction.

The interface includes a calculator toolbar with buttons for undo, redo, copy, paste, plus/minus, multiplication, division, fraction, square root, and equals. Below the toolbar is a large empty input box. To the right of the input box is a vertical menu with the following items: Numbers, Arithmetic and Units, Exponents and Roots, Relations, Geometry, and Groups. A blue arrow points from the right side of the input box to a small black folder icon labeled "Exhibits" on the right edge of the interface.

**Click this once to make
the assessment
reference sheet appear!**

Exhibits

- Here is what it looks like . . .

The screenshot shows a digital document titled "Exhibits" with a "Formula Chart" tab selected. The document is the "PARCC Assessment Reference Sheet" for "Grade 4". It lists various conversion factors and formulas. The conversions are organized into three columns. The formulas are presented in a table at the bottom.

Grade 4

1 inch = 2.54 centimeters	1 kilometer = 0.62 mile	1 cup = 8 fluid ounces
1 meter = 39.37 inches	1 pound = 16 ounces	1 pint = 2 cups
1 mile = 5,280 feet	1 pound = 0.454 kilogram	1 quart = 2 pints
1 mile = 1,760 yards	1 kilogram = 2.2 pounds	1 gallon = 4 quarts
1 mile = 1.609 kilometers	1 ton = 2,000 pounds	1 gallon = 3.785 liters
		1 liter = 0.264 gallons
		1 liter = 1000 cubic centimeters

Triangle	$A = \frac{1}{2}bh$
Right Rectangular Prism	$V = Bh$ or $V = lwh$

- This reference sheet will give you common conversions for you to use.
- For example, it will tell you that 1 inch = 2.54 centimeters.
- Please examine this reference sheet carefully to know what will be given to you to use.
- This will help you solve problems involving conversions.

Highlighter

- If you “double-click” information in the test, a highlighter will open up. You can also highlight with your mouse.
- You will have the option of highlighting in yellow, pink, and blue. The white is an “unhighlighter.”



Highlighter

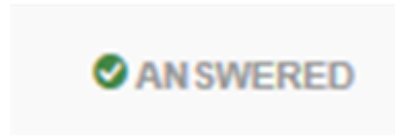
- The highlighter will allow you to highlight information you feel is important throughout the PARCC Assessments.

Review and Flag

- Click on the “Review” button in order to see all questions in your current section.
- You will see the status of the question.
 - This will tell you whether or not you answered it.
- You also will see if you “Flagged” the question.
 - On each individual question, you can hit the “Flag” button. You can do this so you remember to go back.

Review and Flag

- Make sure to really understand how this works.
- If you answer a question, this will appear in the “Status” section . . .



- If you viewed the question but didn't answer, this will appear in the “Status” section .

● NOT ANSWERED

- If you did not view, then this will appear . . .

NOT VIEWED

Review and Flag

- Overall Picture . . .

QUESTION	STATUS	FLAGGED	View >
Question 1	ANSWERED	FLAGGED	View >
Question 2	NOT ANSWERED		View >
Question 3	NOT ANSWERED		View >
Question 4	NOT VIEWED		View >
Question 5	NOT VIEWED		View >

- Also notice you can toggle between three separate views. You can see . . .
 - All
 - Not Answered
 - Flagged

- Notice the three options

- - ANSWERED

- - NOT ANSWERED

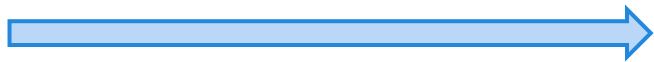
- - NOT VIEWED

- Notice also the View button

- This will allow you to view and to navigate to each individual question from your section.

Review and Flag Goals

- Students must understand and be able to use the Review and Flag buttons seamlessly.
- At the end of every section, all students must review to ensure that all questions were answered.



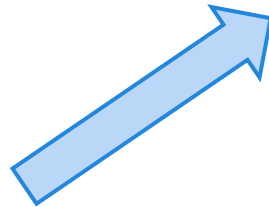
Vocabulary

- Pay attention to the the **bolded** vocabulary. It is your roadmap to success.

An expression is shown, $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7$

What is the expression written in exponential form?

Enter your expression in the space provided. Enter **only** your expression.



Directive Vocabulary

- The following directive vocabulary terms exist in the EOY sections. This is a comprehensive list pulling from Grade 3-8 for the End of Year Sample Tests released in the Spring of 2014..
- I give examples of different types of questions in Grades 3-8 EOY Assessments. (no duplicates)

Directive Vocabulary

- Enter your answer in the box.(G3Q1)
- Which two statements can be represented.
(G3Q2)
- Select the three . . . (G3 Q3)
- Which two ways show how to find the value.
(G3Q4)
- Which clock shows . . . (G3Q5)

Directive Vocabulary

- What is the total number of . . . How many more . . . (G3Q6)
- Drag and Drop the three . . . (G3Q7)
- Plot the point that shows . . . (G3Q8)
- Complete the picture graph to show how many . . . (G3Q9)
- Select the three statements that are true . . . (G3Q13)

Directive Vocabulary

- Which of these shows . . . Use these to find . . . (G3Q15)
- Use the More of Fewer buttons as many times as needed to . . . Then shade by selecting the part or parts. (G3Q17)
- What is the length of the . . . (G3Q18)
- Which three statements can be represented . . . (G3Q22)

Directive Vocabulary

- Select the three shapes that always . . . (G3Q29)
- Which three comparisons are true? (G3Q30)
- Enter your answers in the boxes. (G3Q31)
- For each _____, drag and drop an X onto the line plot to show the length. (G3Q33)
- Which three figures each have . . . (G3Q36)

Directive Vocabulary

- Which expression could be used to find the value of . . . (G3Q38)
- Which statement about _____ is true? (G4Q1)
- Enter your answer in the space provided (G4Q3)
- Drag and drop the answers into the correct order. (G4Q8)

Directive Vocabulary

- Which two of these represent . . . Select the two correct answers. (G4Q15)
- Drag and drop the numbers and symbols into the correct order. (G4Q17)
- For each _____ pictures in the table, select the box for any statement that describes the _____. You may select more than one box for each figure. (G4Q18)

Directive Vocabulary

- Select the correct symbol from each drop-down menu to compare . . . (G4Q20)
- Select the three choices that are . . . (G4Q23)
- Select the correct word and number from each drop-down to complete the statement. (G4Q24)
- Which angle has a measure of _____? (G4Q26)

Directive Vocabulary

- Which two equations represent the statement? Select the two correct answers.
(G4Q28)
- Which expression is equivalent to _____?
(G4Q30)
- Select the correct symbol from each drop-down menu to complete the comparison.
(G4Q31)

Directive Vocabulary

- Drag and drop each number that is a multiple of _____ into the box. (G4Q32)
- Place the fractions in order, from least to greatest. (G4Q34)
- Which two statements are true? (G5Q4)
- Drag and drop one number into each box. (G5Q6)
- Which explanation about figures is correct? (G5Q7)

Directive Vocabulary

- Enter your answer in the space provided.
Enter only your fraction. (G5Q9)
- Drag and drop the names to complete the diagram that shows the relationship among the figures listed. Each category will be used only once. (G5Q13)
- Which equation shows how to find the ____?
(G5Q17)

Directive Vocabulary

- For each sentence, select the option from the drop-down menu that correctly compares the values. (G5Q18)
- Drag and drop the expression that matches each statement into the correct box. Each expression may be used more than once or not at all. (G5Q24)

Directive Vocabulary

- Be sure to graph all three points. What is the coordinate pair that represents . . .? (G5Q26)
- Complete each conversion by dragging and dropping the correct number into the box. (G5Q28)
- Select a phrase from each drop-down to correctly complete each sentence. (G5Q29)

Directive Vocabulary

- Choose three statements that correctly describe . . . (G5Q32)
- Which statement about the corresponding terms in both Pattern A and Pattern B is always true? (G5Q33)
- Drag and drop the correct word or phrase to each row of the table to indicate whether the statement is true, false, or does not contain enough information. (G6Q2)

Directive Vocabulary

- Select all that apply . . . (G6Q4)
- Drag and drop the given rational numbers into the correct order on the number line from least to greatest. (G6Q5)
- Enter your answer in the space provided. Enter only your expression. (G6Q8)
- Create a histogram that represents the data. Adjust the size of the slider by dragging the top of the slider to the appropriate height. (G6Q10)

Directive Vocabulary

- Enter your answer in the space provided.
Enter only your answer. (G6Q11)
- Which question is a statistical question?
(G6Q12)
- What is the greatest common factor of 16
and 48? (G6Q13)
- Use the drop-down menus to complete this
statement . . . (G6Q15)

Directive Vocabulary

- Select the point on the number line located at . . . (G6Q16)
- Be sure to place your final answer in the box. (G6Q21)
- Use the drop-down menus to create an equation that can be used to determine t , the price, in dollars, of 1 towel. (G6Q1 Calculator)

Directive Vocabulary

- On the coordinate grid, select the point that represents the number of . . . (G6Q3 Calculator)
- Use the drop-down menus to complete the sentence. (G6Q8 Calculator)
- What is the surface area, in square feet, of the . . . (G6Q12 Calculator)

Directive Vocabulary

- The mean of the lengths of the insects measured by the science class is (Choose), which is (Choose) than the mean length of adults of that type. (G6Q13 Calculator)
- Select each statement about the graph that is true. Select all that apply. (G7Q1)
- What is the constant of proportionality between x and y ? Enter your answer as a decimal. (G7Q3)

Directive Vocabulary

- Select the correct number from each drop-down menu to complete the equation. (G7Q6)
- What was the value, in dollars, of the investment at the end of the month? Enter your answer in the box. (G7Q8)
- In which situation could the quotient of $-24/3$ be used to answer the question? (G7Q10)

Directive Vocabulary

- Solve each equation. Then, enter a number in each box to make this statement true . . . (G7Q11)
- Select an expression from each drop-down menu to make this statement true . . . (G7Q12)
- What is the area, in square inches, of the mirror?
What is the combined area, in square inches, of the circular mirror and the frame? (G7Q5 Calculator)
- Select a choice from each drop-down menu to make this statement true . . . (G7Q6 Calculator)

Directive Vocabulary

- Based on _____, which statement best compares the number of ____ from the two ____? (G7Q7 Calculator)
- Select each box in the table that identifies ____ that could result from _____. (G7Q11 Calculator)

Directive Vocabulary

- Which statement best predicts how many times the digit ____ will appear among ____ results? (G7Q17 Calculator)
- Solve for x . Enter your answer in the space provided. Enter only your solution. (G8Q1)
- Select your answer. (G8Q2)
- Select each correct statement. (G8Q4)

Directive Vocabulary

- For each interval in the table, indicate whether the function is increasing, decreasing, or neither increasing nor decreasing over the interval. (G8Q6)
- Indicate whether each system of equations has no solution, one solution, or infinitely many solutions by selecting the correct cell in the table. Select one cell per column. (G8Q7)

Directive Vocabulary

- Which equation has both 4 and -4 as a possible value of y ? (G8Q9)
- Which statement about this function must be true? (G8Q10)
- When the input of the function is _____, what is the output of the function? (G8Q14)
- Which of these most closely approximates a line of best fit for the data in the _____? (G8Q15)

Directive Vocabulary

- Classify each equation as defining y as a linear or non-linear function of x . Select one cell per column. (G8Q17)
- Select the point on the number line that best approximates the location of _____. (G8Q19)
- Based on the results of the survey, which statements are true? Select each correct statement. (G8Q3 Calculator)

Directive Vocabulary

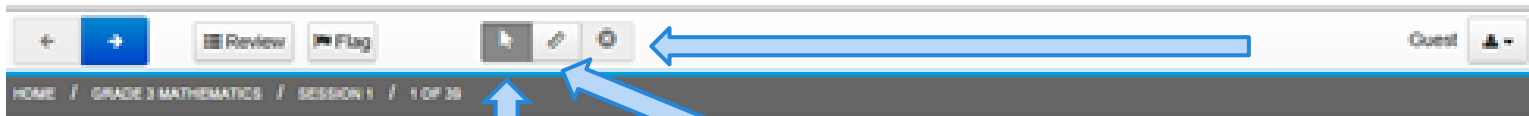
- Which statement when comparing the functions is true? (G8Q5 Calculator)
- Which statements are true? Select all that apply. (G8Q6 Calculator)
- Select a place on the grid to plot each point. (G8Q7 Calculator)
- Order the linear functions on a rate of change, from least to greatest. (G8Q10 Calculator)

Directive Vocabulary

- To graph a line, select two points on the coordinate plane. A line will be drawn through the points. (G8Q12 Calculator)
- Which numbers represent the number Liz saw? (G8Q13 Calculator)

Grade 3 Toolbar Always at the Top

- The EOY Grade 3 examination has several tools that students must be able to use and manipulate effectively. Here is a picture of the top toolbar in 3rd grade. **This is an answer eliminator.**



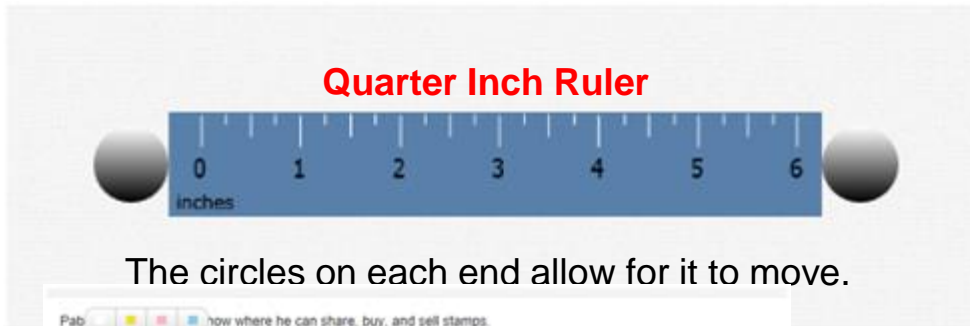
These two buttons navigate to the next and previous question

This is the pointer. It will allow you to click on multiple choice answers and such.

This is a Quarter Inch Ruler

Grade 3 Toolbar Always at the Top

- Here are pictures of the tools.



Pablo shows where he can share, buy, and sell stamps.

Part A

The first day, Pablo starts with 744 stamps. He buys 27 stamps from his friend. He then sells 139 stamps.

What is the total number of stamps that Pablo has after the first day of the stamp show?

Enter your answer in the box.

stamps

Part B

The second day, Pablo buys 6 packages of car stamps. Each package has 6 car stamps. Pablo shares these car stamps equally among himself and 3 friends.

What is the total number of car stamps that Pablo and each of his 3 friends receive?

Enter your answer in the box.

stamps

Which two statements can be represented by the expression 4×8 ?

- A. A teacher puts 8 chairs at each of 4 tables.
- B. Tom bought 4 markers and used 8 black markers.
- C. Marie shares her 8 marbles equally among 4 friends.
- D. There are 4 rows of flowers. There are 8 flowers in each row.
- E. There are 8 ducks in the pond. Then, 4 more ducks join them.

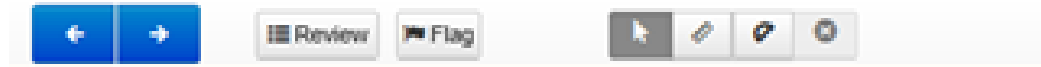
Highlighting

- You can select information and highlight it in the problem.

- Notice how you can eliminate answers you find incorrect.
- This feature only works for multiple choice problems.

Grade 4 Toolbar Always at the Top

- The EOY Grade 4 examination has the same tool bar as Grade 3 except the Protractor is added.
- The ruler is not a Quarter Inch, but an Eighth Inch.

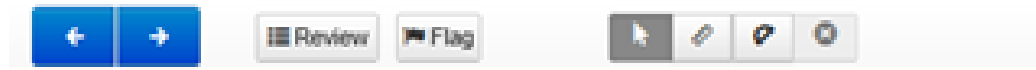


Protractor

This is the Protractor. Notice the two circles on each end. These allow for it to move.

Grade 5 Toolbar Always at the Top

- The Grade 5 tools are exactly the same as Grade 4.



Grade 6 Toolbar Always at the Top

- The Ruler is not Eighth Inch but Centimeter.
- Non-Calculator (Same as Grade 5)



- Calculator
 - There is the addition of the calculator.



Grade 7 Toolbar Always at the Top

- Grade 7 Tools are the same as 6th grade.
- Non-Calculator

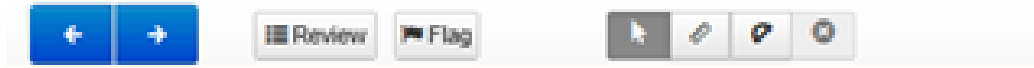


- Calculator



Grade 8 Toolbar Always at the Top

- Grade 8 Tools are the same as 7th grade.
- Non-Calculator



- Calculator



Grade 4-5 Tools You Will See Embedded in Certain Problems

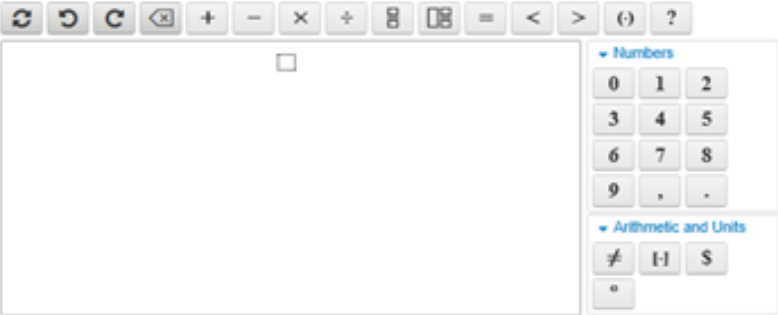
- For Grades 4-5, you will have problems that embed tools you must know.
- The following slides will describe the tools you will see in Grades 4-5.

Grades 4-5 Tools You Will See Embedded in Certain Problems

- You must understand the toolbars. You need to understand all that apply here.

Isabel lives $\frac{3}{4}$ mile from school. Janet lives $\frac{2}{3}$ mile from school.

How much farther, in miles, does Isabel live from school than Janet? Enter your answer in the space provided. Enter only your fraction.



The interface includes a toolbar with the following icons: a refresh button, a redo button, an undo button, a delete button, a plus sign, a minus sign, a multiplication sign, a division sign, a fraction template button, a decimal template button, an equals sign, a left arrow, a right arrow, a negative sign, and a question mark. Below the toolbar is a large empty input box with a small square cursor. To the right of the input box is a numeric keypad with buttons for digits 0-9, a decimal point, and a fraction bar. Below the numeric keypad is an 'Arithmetic and Units' section with buttons for a fraction bar, a plus sign, a minus sign, and a multiplication sign.

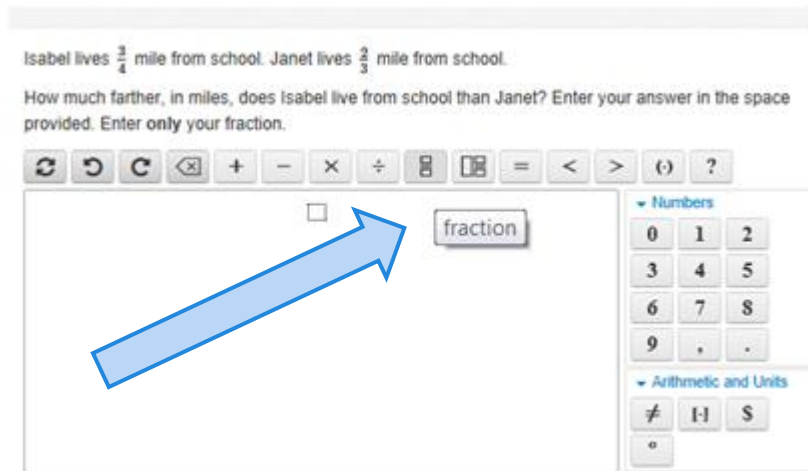
Grades 4-5 Tools You Will See Embedded in Certain Problems

- Hover over each top toolbar in order for the purpose to appear.

Example of the hover: When you hover your mouse over the toolbar sections, the explanation appears. In this example, I am hovering over the “fraction” icon. The arrow is pointing to this example.

Isabel lives $\frac{3}{4}$ mile from school. Janet lives $\frac{2}{3}$ mile from school.

How much farther, in miles, does Isabel live from school than Janet? Enter your answer in the space provided. Enter only your fraction.



The interface includes a toolbar with icons for undo, redo, clear, copy, paste, and mathematical operations (+, -, ×, ÷, fraction, decimal, equals, left arrow, right arrow, parentheses, and help). Below the toolbar is a large input area with a small square icon and a text box containing the word "fraction". To the right is a numeric keypad with buttons for digits 0-9, a decimal point, and a fraction button. Below the keypad are buttons for arithmetic and units symbols: ≠, I-I, S, and °.

Grades 4-5 Tools You Will See Embedded in Certain Problems

- Top Toolbar



Clear All Undo Redo Backspace plus sign minus sign times sign division sign fraction mixed number equal less than greater than parenthesis unknown number

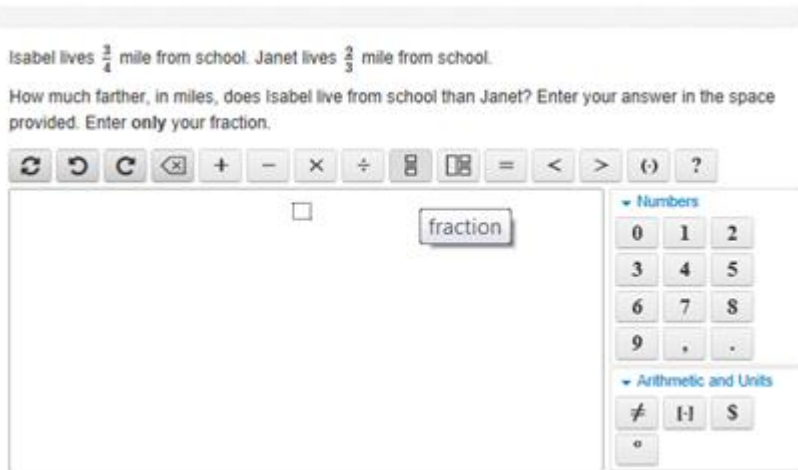
You must know what each means and the corresponding function.

Grades 4-5 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

- Side Portions

Isabel lives $\frac{3}{4}$ mile from school. Janet lives $\frac{2}{3}$ mile from school.

How much farther, in miles, does Isabel live from school than Janet? Enter your answer in the space provided. Enter only your fraction.



The screenshot shows a math problem interface. At the top, the problem text is displayed. Below it is a large input box for the answer. To the right of the input box is a 'fraction' button. Above the input box is a toolbar with various mathematical symbols and functions. To the right of the input box is a 'Numbers' panel with a grid of buttons for digits 0-9, a decimal point, and a fraction bar. Below the 'Numbers' panel is an 'Arithmetic and Units' panel with buttons for the fraction bar, a plus sign, a minus sign, and a degree symbol. A blue arrow points from the right side of the interface towards the 'Numbers' panel.

You must know what each of these will do when you click on the drop down arrow for each of the two sections.

The sections appear for you, but you can close them as well during a problem.

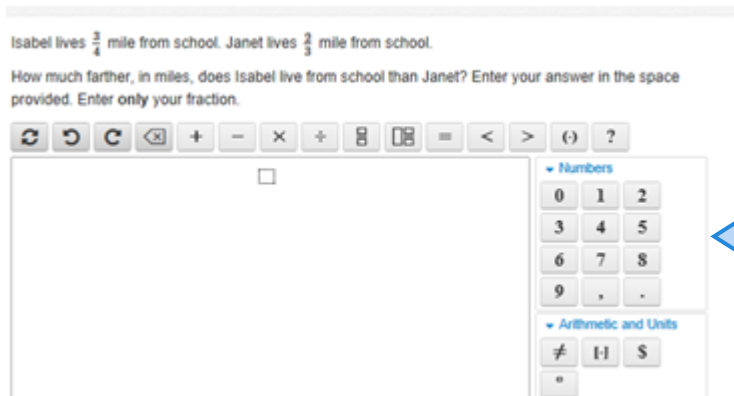
- Numbers
- Arithmetic and Units

Grades 4-5 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

- Numbers

Isabel lives $\frac{3}{4}$ mile from school. Janet lives $\frac{2}{3}$ mile from school.

How much farther, in miles, does Isabel live from school than Janet? Enter your answer in the space provided. Enter only your fraction.



The image shows a math problem interface. At the top, it states: "Isabel lives $\frac{3}{4}$ mile from school. Janet lives $\frac{2}{3}$ mile from school." Below this, it asks: "How much farther, in miles, does Isabel live from school than Janet? Enter your answer in the space provided. Enter only your fraction." There is a text input field with a small square cursor. To the right of the input field is a calculator keypad. The keypad has a top row of navigation buttons: a refresh button, a back button, a forward button, a delete button, and buttons for addition (+), subtraction (-), multiplication (x), division (÷), a fraction button, a decimal button, an equals button, left and right arrow buttons, a sign button (±), and a help/question mark button (?). Below these are two sections: "Numbers" and "Arithmetic and Units". The "Numbers" section contains buttons for digits 0-9, a decimal point, and a fraction bar. The "Arithmetic and Units" section contains buttons for a fraction bar, a percent sign (%), a dollar sign (\$), and a degree symbol (°). A blue arrow points from the right towards the calculator keypad.

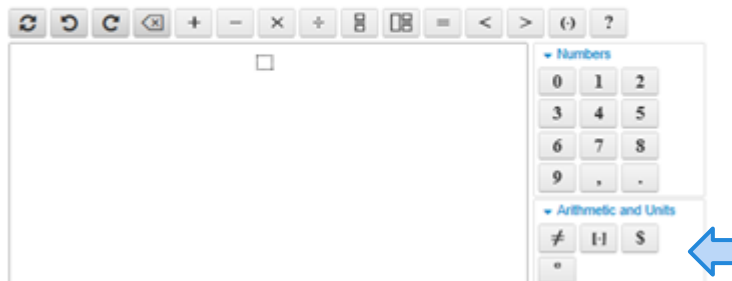
- You must know that the numbers 0-9 will be available.
- The , and . function will be available.

Grades 4-5 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

- Arithmetic and Units

Isabel lives $\frac{3}{4}$ mile from school. Janet lives $\frac{2}{3}$ mile from school.

How much farther, in miles, does Isabel live from school than Janet? Enter your answer in the space provided. Enter only your fraction.



The interface includes a toolbar with standard calculator functions (undo, redo, copy, paste, clear, equals, left arrow, right arrow, parentheses, and help) and a numeric keypad. The numeric keypad is divided into two sections: 'Numbers' (0-9, .) and 'Arithmetic and Units' (≠, ≤, \$). A blue arrow points to the '\$' button.

Here are the signs in order that you need to recognize and understand their function:

- not equal
- bracket
- dollar sign
- degree sign

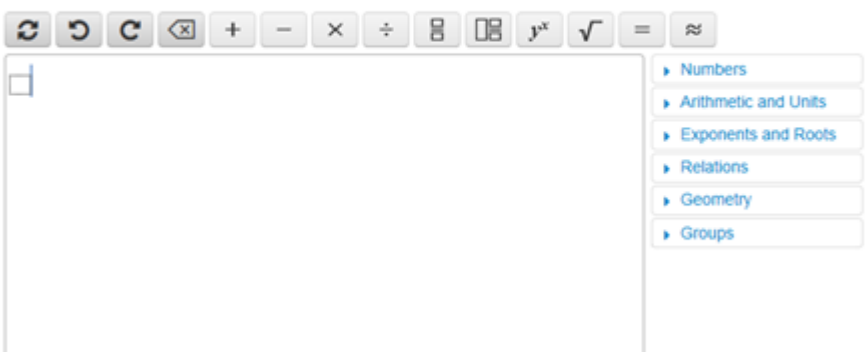
Grades 6-8 Tools You Will See Embedded in Certain Problems

- For Grades 6-8, you will have problems that embed tools you must know.
- The following slides will describe the tools you will see in Grades 6-8.

Grades 6-8 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

- You must understand the toolbars. You need to understand all that apply here.

Solve for x . Enter your answer in the space provided. Enter **only** your solution.

$$9(3 - 2x) = 2(10 - 8x)$$


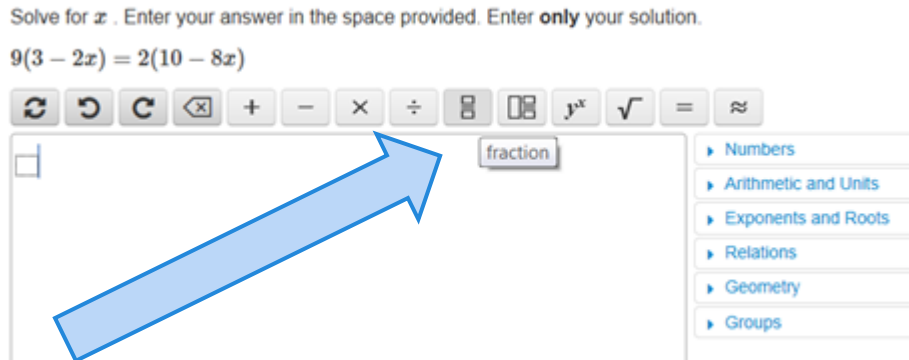
- Numbers
- Arithmetic and Units
- Exponents and Roots
- Relations
- Geometry
- Groups

Grades 6-8 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

- Hover over each top toolbar in order for the purpose to appear.

Example of the hover: When you hover your mouse over the toolbar sections, the explanation appears. In this example, I am hovering over the “fraction” icon. The arrow is pointing to this example.

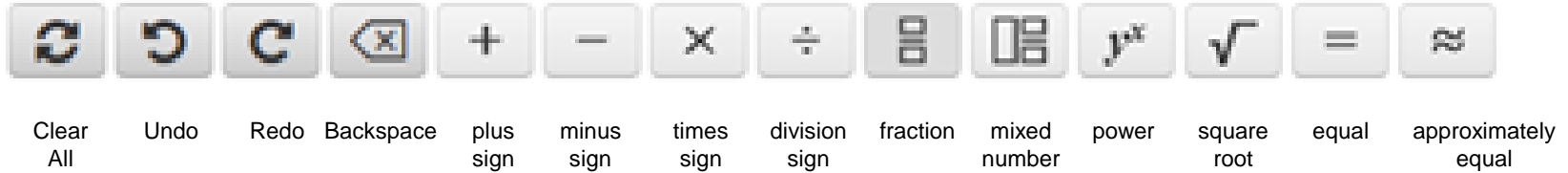
Solve for x . Enter your answer in the space provided. Enter **only** your solution.

$$9(3 - 2x) = 2(10 - 8x)$$


The screenshot shows a math problem interface. At the top, it says "Solve for x . Enter your answer in the space provided. Enter **only** your solution." Below this is the equation $9(3 - 2x) = 2(10 - 8x)$. Underneath the equation is a toolbar with various mathematical symbols: a refresh icon, a redo icon, a undo icon, a delete icon, a plus sign, a minus sign, a multiplication sign, a division sign, a fraction icon, a decimal icon, a power icon, a square root icon, an equals sign, and an approximate icon. A blue arrow points to the fraction icon. Below the toolbar is an input field with a small square icon on the left. To the right of the input field is a dropdown menu with the word "fraction" selected. The dropdown menu is open, showing a list of categories: Numbers, Arithmetic and Units, Exponents and Roots, Relations, Geometry, and Groups. Each category has a right-pointing arrow next to it.

Grades 6-8 Tools You Will See Embedded in Certain Problem(Not a Calculator!)

- Top Toolbar



You must know what each means and the corresponding function.

Grades 6-8 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

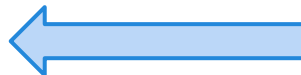
- Side Portions

Solve for x . Enter your answer in the space provided. Enter **only** your solution.

$$9(3 - 2x) = 2(10 - 8x)$$



- ▶ Numbers
- ▶ Arithmetic and Units
- ▶ Exponents and Roots
- ▶ Relations
- ▶ Geometry
- ▶ Groups



You must know what each of these will do when you click on the drop down arrow for each of the six sections.

- Numbers
- Arithmetic and Units
- Exponents and Roots
- Relations
- Geometry
- Groups

Grades 6-8 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

- Numbers

Solve for x . Enter your answer in the space provided. Enter **only** your solution.

$$9(3 - 2x) = 2(10 - 8x)$$



A screenshot of a math problem interface. At the top, it says "Solve for x. Enter your answer in the space provided. Enter only your solution." Below this is the equation $9(3 - 2x) = 2(10 - 8x)$. Underneath the equation is a toolbar with various mathematical symbols and functions: a refresh button, a back button, a forward button, a clear button, a plus sign, a minus sign, a multiplication sign, a division sign, a fraction button, a power button, a square root button, an equals sign, and an approximation symbol. Below the toolbar is a large empty input box. To the right of the input box is a calculator keypad with a dropdown menu labeled "Numbers" that is open, showing buttons for digits 0-9, a decimal point, and the pi symbol. A large blue arrow points from the top of the keypad area down towards the input box.

- You must know that the numbers 0-9 will be available.
- The , and . function will be available.
- Constant Pi will be available.

Grades 6-8 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

- Arithmetic and Units

Here are the signs in order that you need to recognize and understand their function:

Solve for x . Enter your answer in the space provided. Enter **only** your solution.

$9(3 - 2x) = 2(10 - 8x)$



The image shows a math problem interface. At the top, it says "Solve for x . Enter your answer in the space provided. Enter **only** your solution." Below this is the equation $9(3 - 2x) = 2(10 - 8x)$. There is a text input field with a cursor. Above the input field is a toolbar with various mathematical symbols: a refresh button, a redo button, a undo button, a delete button, a plus sign, a minus sign, a multiplication sign, a division sign, a fraction button, a decimal button, a power button, a square root button, an equals sign, and a pi button. A blue arrow points from the top of the page down to the "Arithmetic and Units" dropdown menu. The dropdown menu is open and shows a list of symbols: a plus sign, a minus sign, a multiplication sign, a division sign, a plus-minus sign, a negative sign, a times dot, a division slash, a dollar sign, a degree sign, and a percent sign.

- plus sign
- minus sign
- times sign
- division sign
- plus-minus sign
- negative sign
- times dot
- division slash
- dollar sign
- degree sign
- percent sign

Grades 6-8 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

- Exponents and Roots

Solve for x . Enter your answer in the space provided. Enter **only** your solution.

$9(3 - 2x) = 2(10 - 8x)$



The image shows a digital math problem interface. At the top, it says "Solve for x. Enter your answer in the space provided. Enter only your solution." Below this is the equation $9(3 - 2x) = 2(10 - 8x)$. Underneath the equation is a toolbar with various mathematical symbols: a refresh icon, a left arrow, a right arrow, a delete icon, a plus sign, a minus sign, a multiplication sign, a division sign, a fraction icon, a decimal icon, a power icon (x^y), a square root icon ($\sqrt{\quad}$), an equals sign, and an approximate sign (\approx). Below the toolbar is a text input field. To the right of the input field is a dropdown menu with three categories: "Numbers", "Arithmetic and Units", and "Exponents and Roots". The "Exponents and Roots" category is expanded, showing three icons: a power icon (x^y), a square root icon ($\sqrt{\quad}$), and a cube root icon ($\sqrt[3]{\quad}$). A large blue arrow points from the top of the page down to the "Exponents and Roots" category in the dropdown menu.

Here are the signs in order that you need to recognize and understand their function:

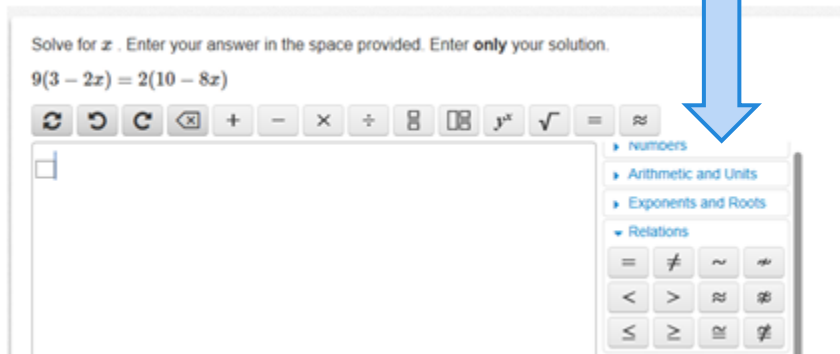
- power
- square root
- cube root

Grades 6-8 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

- Relations

Here are the signs in order that you need to recognize and understand their function:

- equal
- not equal
- similar
- not similar
- less than
- greater than
- approximately equal
- not approximately equal
- less than or equal
- greater than or equal
- congruent
- not congruent



Solve for x . Enter your answer in the space provided. Enter **only** your solution.

$$9(3 - 2x) = 2(10 - 8x)$$

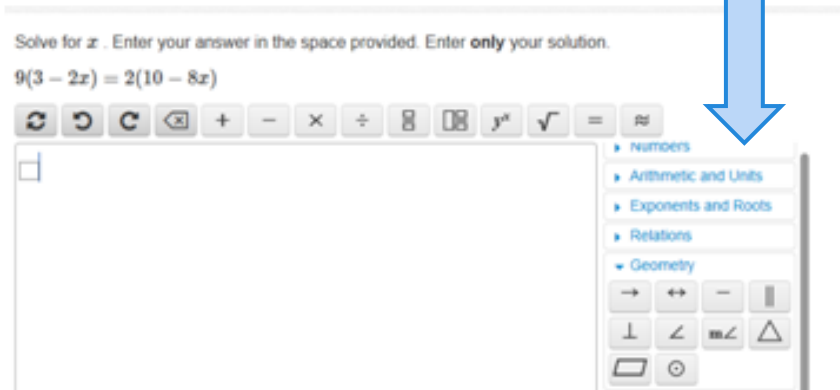
The interface includes a calculator toolbar with buttons for undo, redo, clear, delete, plus, minus, multiply, divide, fraction, decimal, power, square root, equals, and approximate. A blue arrow points from the 'Relations' section of the toolbar to the list of signs on the right. The 'Relations' menu is expanded, showing symbols for equal, not equal, similar, not similar, less than, greater than, approximately equal, not approximately equal, less than or equal, greater than or equal, congruent, and not congruent.

Grades 6-8 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

- Geometry

Solve for x . Enter your answer in the space provided. Enter **only** your solution.

$9(3 - 2x) = 2(10 - 8x)$



The screenshot shows a math problem interface. At the top, it says "Solve for x. Enter your answer in the space provided. Enter only your solution." Below this is the equation $9(3 - 2x) = 2(10 - 8x)$. There is a large blue arrow pointing from the text "Here are the signs in order that you need to recognize and understand their function:" to a geometry tool palette. The palette is open and shows various geometric symbols and tools. The symbols include a ray, a line, a line segment, a parallel symbol, a perpendicular symbol, an angle symbol, an angle measure symbol, a triangle, a parallelogram, and a circle.

Here are the signs in order that you need to recognize and understand their function:

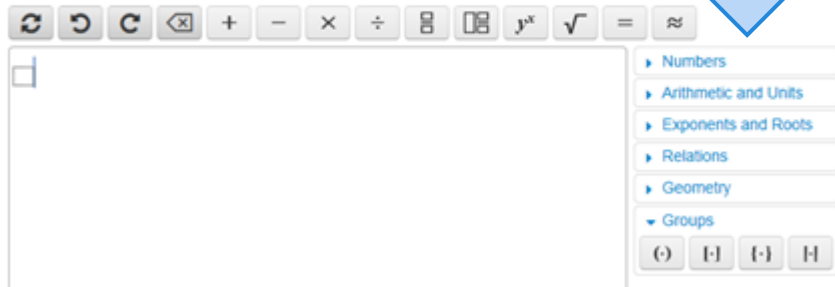
- ray
- line
- line segment
- parallel
- perpendicular
- angle
- angle measure
- triangle
- parallelogram
- circle

Grades 6-8 Tools You Will See Embedded in Certain Problems (Not a Calculator!)

- Groups

Solve for x . Enter your answer in the space provided. Enter **only** your solution.

$$9(3 - 2x) = 2(10 - 8x)$$



The image shows a digital math interface. At the top, there is a toolbar with various mathematical symbols: a refresh icon, a back arrow, a forward arrow, a delete icon, a plus sign, a minus sign, a multiplication sign, a division sign, a fraction template, a decimal template, a power function y^x , a square root $\sqrt{\quad}$, an equals sign, and an approximation symbol \approx . Below the toolbar is a large empty input box. To the right of the input box is a dropdown menu with the following categories: Numbers, Arithmetic and Units, Exponents and Roots, Relations, Geometry, and Groups. The 'Groups' category is expanded, showing four icons: a circle with a dot, a left-facing curly brace, a right-facing curly brace, and a vertical bar.

Here are the signs in order that you need to recognize and understand their function:

- parenthesis
- bracket
- brace
- absolute value

Examples

- The following are examples of different tasks that students will be expected to be proficient on for the PARCC assessment.

Grade 3 EOY (Question 1)

Answer Box

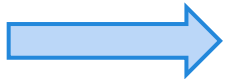
- You must know that there is a text box that you must enter your answer into.

Kevin makes muffins.

- It takes 8 minutes to mix the batter.
- The muffins bake for 17 minutes.
- The muffins then cool for 5 minutes.

What is the total amount of time, in minutes, Kevin spends mixing, baking, and cooling the muffins?

Enter your answer in the box.

 minutes

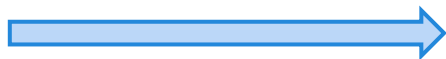
Text Box

- When you enter a number into a text box, an “X” will appear on the right. If you click on this “X” the number you entered will delete.
 - This may or may not happen depending on the Grade Level
- If you enter anything besides a number, the words “Invalid Input” will appear.

Grade 3 EOY (Question 2)

Multiple Clicks

- You must know that you can click multiple statements for your answers. It allows you to choose more than two! The number asked for may change!



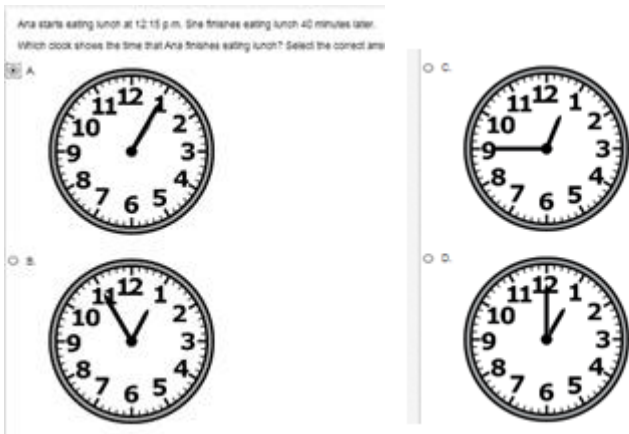
Recognize the bold statement.
It tells you to know that you
need two! It's a roadmap.

Which two statements can be represented by the expression 4×8 ?

- A. A teacher puts 8 chairs at each of 4 tables.
- B. Tom buys 4 red markers and 8 black markers.
- C. Marie shares her 8 marbles equally among 4 friends.
- D. There are 4 rows of flowers. There are 8 flowers in each row.
- E. There are 8 ducks in the pond. Then, 4 more ducks join them.

Grade 3 EOY (Question 5) Zooming

- This is a great example of how zooming will help you see all at once.



This is a great example of how you can use the Control - and + keys on the keyboard in order to see the entire problem. This is your choice. If you don't zoom out, then you will have to move around with your mouse to see the entire screen.

Grade 3 EOY (Question 6) Part A/B

- Part A (Multiple Choice Click) - Part B (Text Box)

You have a multiple choice in Part A and a text box you must enter an answer into in Part B.

Mr. Conley delivers packages. The bar graph shows the total number of packages he delivered on five days last week.



Part A

What is the total number of packages Mr. Conley delivered on Monday and Tuesday?

- A. 300
- B. 340
- C. 350
- D. 360

Multiple Choice

Part B

How many **more** packages did Mr. Conley deliver on Monday and Tuesday than he did on Thursday and Friday?

Enter your answer in the box.

packages

Text Box

Grade 3 EOY (Question 7) Drag and Drop

- You need to drag three quadrilaterals into the appropriate box.

Drag and drop the **three** quadrilaterals into the box.

Drag from here . . .

Practice These!

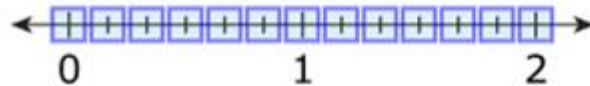
Into here . . .

The image shows a row of six shapes, each in a light blue box. From left to right: a right-angled triangle, a square, a hexagon, a rectangle, a parallelogram, and a pentagon. A blue arrow points from the parallelogram box down to a larger, empty light gray box below. To the right of the arrow is the text 'Into here . . .'. Above the row of shapes is the text 'Drag and drop the three quadrilaterals into the box.' To the right of the row is the text 'Practice These!'. Above the parallelogram box is the text 'Drag from here . . .' with a blue arrow pointing down to the parallelogram box.

Grade 3 EOY (Question 8) Number Line

- You need to know how to click on the appropriate space on the number line. Only one click will register; you will have to click again to move the highlighted box.

Plot the point that shows $\frac{5}{6}$ on the number line.



Grade 3 EOY (Question 9) Bar Graph Drag and Drop

- You must drag the appropriate # of stars.

Jana gets a sticker for every 5 minutes she spends on her chores each day. She puts them on a picture graph as shown.

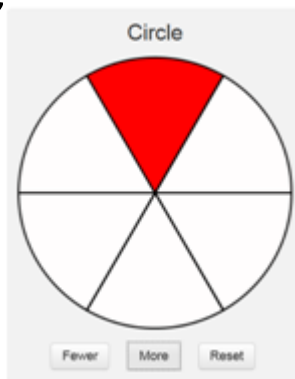
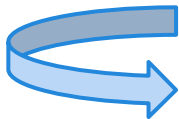
Jana spends a total of 130 minutes doing chores during the week. Complete the picture graph to show how many stickers Jana gets on Friday.



Grade 3 EOY (Question 17) Dividing a Circle

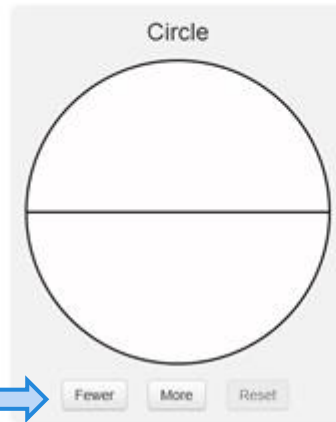
- You must know how to use the Fewer, More, and Reset buttons for this task. Then click to shade

Finally, you must click the portion of the circle you want to shade ($\frac{1}{6}$!)

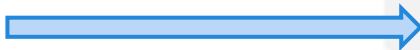


Use the More or Fewer buttons as many times as needed to divide the circle into 6 equal parts.

Then shade $\frac{1}{6}$ of the area of the circle. Divide the figure into the correct number of equal parts by using the More and Fewer buttons. Then shade by selecting the part or parts.



- By using the “More” button, you will divide the circle.
- By using the “Fewer” button, you will take a division away.



Grade 3 EOY (Question 19) 3 Drag and Drop Boxes

- You must know how to drag and drop the three areas into the correct boxes.

This is how the problem looks before you drag and drop the correct answers.

Drag and drop the correct area into the box below each shaded rectangle.

20 Square Feet 24 Square Feet
27 Square Feet 28 Square Feet

4 Feet 6 Feet 4 Feet 7 Feet 3 Feet 9 Feet

The proper answers were dragged and dropped into the corresponding boxes.

Drag and drop the correct area into the box below each shaded rectangle.

20 Square Feet

4 Feet 6 Feet 4 Feet 7 Feet 3 Feet 9 Feet

24 Square Feet 28 Square Feet 27 Square Feet

Grade 3 EOY (Question 24) Part A

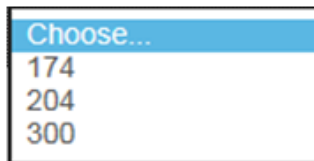
Dropdown - Part B Text Box

- You must know that Part A has 2 drop down boxes. Each must be selected. Part B is a text box.



A close-up of a dropdown menu. The top bar is blue with the text "Choose...". Below it, three options are listed: 48, 78, and 174.

← The 1st drop down . . .



A close-up of a dropdown menu. The top bar is blue with the text "Choose...". Below it, three options are listed: 174, 204, and 300.

← The 2nd drop down . . .

A library has 126 books about trees.

Part A

The library has 48 fewer books about rivers than about trees.

Select from the drop-down menus to correctly complete the statement.

The number of books the library has about rivers is and the total number of books the library has about trees and rivers is .

Part B

Two students borrow books about trees. Each student borrows 8 books. How many books about trees remain in the library?

Enter your answer in the box.

Grade 3 EOY (Question 33) Drag and Drop to a Line Plot

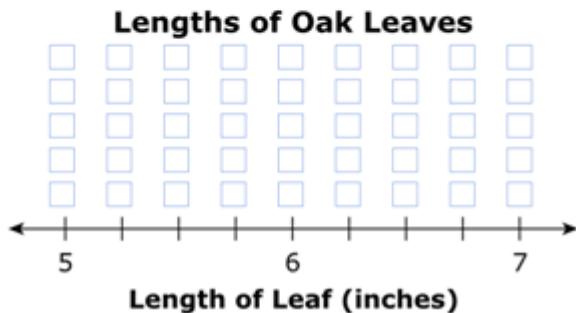
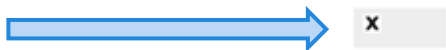
- You must know how to drag and drop into the line plot. Notice the highlighting.

Eric measures 10 oak leaves with a ruler. He records the lengths as shown.

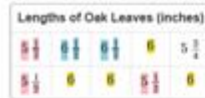
Lengths of Oak Leaves (inches)				
$5\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	6	$5\frac{3}{4}$
$5\frac{1}{2}$	6	6	$5\frac{1}{2}$	6

Before ...

For each oak leaf, drag and drop an X onto the line plot to show the length.

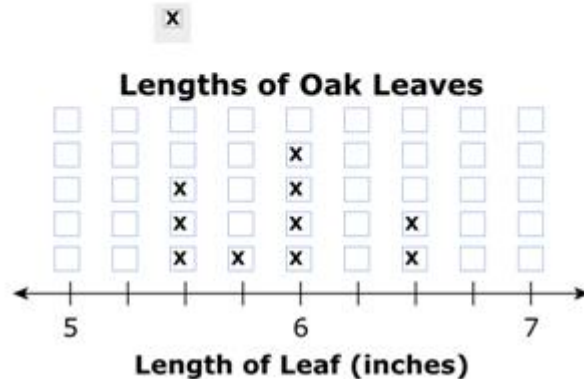


Eric measures 10 oak leaves with a ruler. He records the lengths as shown.



After ...

For each oak leaf, drag and drop an X onto the line plot to show the length.

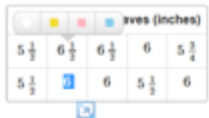


Grade 3 EOY (Question 33) Double Click Highlight

- Notice the “double-click highlight”

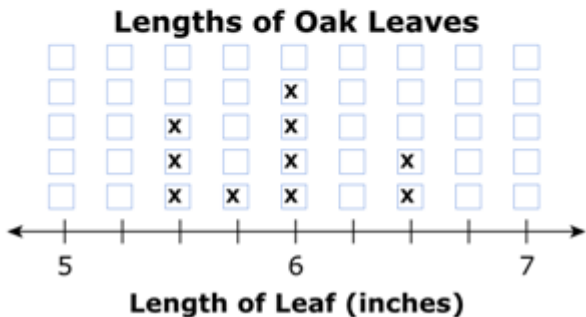
By double-clicking you will activate the highlighter. This gives you the option of coloring your answers.

Eric measures 10 oak leaves with a ruler. He records the lengths as shown.

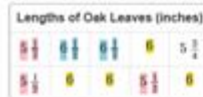


For each oak leaf, drag and drop an X onto the line plot to show the length.

X

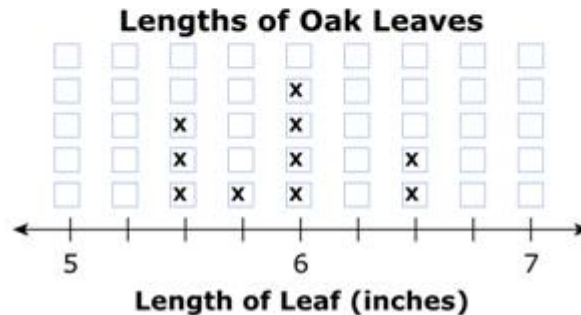


Eric measures 10 oak leaves with a ruler. He records the lengths as shown.



For each oak leaf, drag and drop an X onto the line plot to show the length.

X



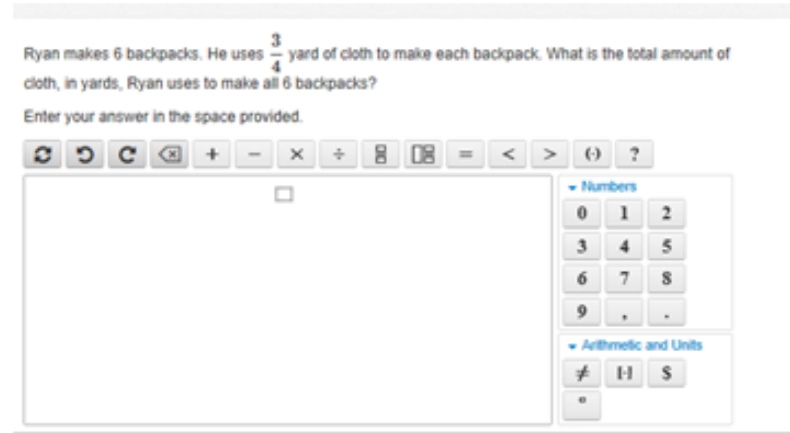
A great way to mark what you have done!

Grade 4 EOY (Question 3) Toolbar

- Notice that the toolbar is opened for you. There are two sections (Numbers and Arithmetic and Units).

Ryan makes 6 backpacks. He uses $\frac{3}{4}$ yard of cloth to make each backpack. What is the total amount of cloth, in yards, Ryan uses to make all 6 backpacks?

Enter your answer in the space provided.



The screenshot shows a math problem interface. At the top, the problem text is displayed: "Ryan makes 6 backpacks. He uses $\frac{3}{4}$ yard of cloth to make each backpack. What is the total amount of cloth, in yards, Ryan uses to make all 6 backpacks?". Below the text is a large empty input box for the answer. To the right of the input box is a toolbar with two sections. The first section, labeled "Numbers", contains buttons for digits 0-9, a decimal point, and a fraction template button. The second section, labeled "Arithmetic and Units", contains buttons for the fraction template, a percent sign, and a dollar sign. Above the input box is a row of navigation and calculation buttons: a refresh button, a back button, a forward button, a search button, a plus sign, a minus sign, a multiplication sign, a division sign, a fraction template button, a percent sign, an equals sign, a left arrow, a right arrow, a parentheses button, and a question mark button.

Grade 4 EOY (Question 8) Drag and Drop with a 4th Grade Toolbar

- Notice that you have to drag and drop the fractions with the correct operation into the correct boxes for Part A.
- For Part B, you need to add the fractions from Part A and enter them into the space in Part B.
- This involves knowing the fraction button.

Grade 4 EOY (Question 8) Drag and Drop with a 4th Grade Toolbar

- Here is a finished picture . . .

Each student in a class chose one sport to play. This table shows the fractions of all students who chose each sport.

Sport	Fraction of All Students
Soccer	$\frac{3}{10}$
Football	$\frac{3}{10}$
Hockey	$\frac{3}{10}$
Basketball	$\frac{1}{10}$

Part A

Drag and drop the fractions and operation symbols into the blanks to create an equation that can be used to find a , the fraction of all students that chose to play either **soccer or basketball**.

Drag and drop the answers into the correct order.

$\frac{1}{10}$ $\frac{3}{10}$ $-$ $+$ $=$

$\frac{3}{10}$ $-$ $\frac{4}{10}$ $= a$

Part B

Enter the fraction of all the students who chose to play either soccer or basketball.

Enter your answer in the space provided.

$\frac{3}{10}$

- Notice that important information was highlighted.
- You may have highlighted other information as well.

Grade 4 EOY (Question 13) Two Toolbars

- Know you may see two toolbars in a problem.

Part A

What fraction is equivalent to $\frac{3}{10}$ and has a denominator of 100?

Enter your answer in the space provided.



Part B

What is the total length, in meters, of the two boards?

Enter your answer in the space provided.








The image shows two identical calculator interfaces for a math problem. Each interface includes a toolbar with navigation and calculation buttons, a large input area with a small square cursor, and a numeric keypad with a 'Numbers' section (0-9, ., -) and an 'Arithmetic and Units' section (fraction, pi, infinity, %).

Grade 4 EOY (Question 18) Table

- You need to read to understand the difference between “appear” and “has.”

For each figure pictured in the table, select the box for any statement that describes the figure. You may select more than one box for each figure.

	Appears to have at least 2 parallel sides	Has at least 2 perpendicular sides
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Grade 4 EOY (Question 20) Three Drop Downs Choosing a Symbol

- You must operate 3 Drop Downs while choosing the correct symbol.

- Notice the drop downs.
- You must understand how to operate them and the meaning of each symbol.

Select the correct symbol from each drop-down menu to compare the measurements.

0.4 meter	<input type="text" value="Choose..."/>	0.04 meter
0.3 meter	<input type="text" value="Choose..."/>	0.5 meter
0.65 meter	<input type="text" value="Choose..."/>	0.61 meter

Grade 4 EOY (Question 24) Drop Down with Place Value

- There are 2 Drop Downs with place value.

The number 234 is multiplied by 10.

Select the correct word and number from each drop-down menu to complete the statement.

The numeral 2 in the resulting product is in the place,

and the value of this digit is .

Full Problem

Drop Downs . . .

Choose...
ones
tens
hundreds
thousands

Choose...
2
20
200
2,000





Grade 4 EOY (Question 26)

Protractor

- You must be proficient at using the protractor.

Which angle has a measure of 65° ?

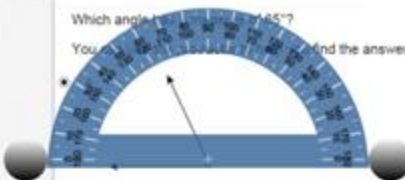
You can use the protractor to help you find the answer.


- A. 
- B. 
- C. 
- D. 


- Understand the + sign and how it should be lined up.


Which angle has a measure of 65° ?


You can use the protractor to help you find the answer.



A. 

B. 

C. 

D. 

Grade 4 EOY (Question 34) Part A Placement and Part B Toolbar Problem

- Understand you may have a placement in order problem with a toolbar problem.

Rachana has a set of 10 mugs. The set is made up of three different kinds of mugs.

- $\frac{1}{2}$ of the mugs have pictures on them.
- $\frac{2}{5}$ of the mugs have words on them.
- $\frac{1}{10}$ of the mugs have flowers on them.

Part A

Place the fractions in order, from least to greatest.

Least	<input type="text" value="1/10"/>
	<input type="text" value="2/5"/>
Greatest	<input type="text" value="1/2"/>

Part B

Enter a fraction equal to $\frac{1}{5}$, with a denominator of 10, to show the fraction of the set of mugs that have words on them.

Enter your answer in the space provided.

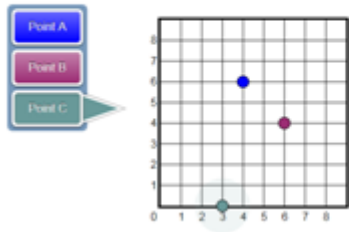
< > () ?

Numbers
0 1 2 3
4 5 6 7
8 9 + -
Arithmetic and Units
÷ × % °

Grade 5 EOY (Question 1) Graphing Multiple Points on a coordinate plane

- You need to know how to utilize the buttons and graph three separate points on the coordinate plane.

Graph points A, B, and C on the coordinate plane. Point A should be located at $(4, 6)$, point B should be located at $(6, 4)$, and point C should be located at $(3, 0)$. Select the "Point A" button and plot the point. Select the "Point B" button and plot the point. Select the "Point C" button and plot the point. Be sure to graph all **three** points.



- You must click on each box (Point A - Point B - Point C) each time to generate the color of the point that corresponds to the separate coordinates.
- If you want to move a point after you have placed it, you must be sure to “reclick” on the proper color.

Grade 5 EOY (Question 6) Drag and Drop Decimals

- You must drag and drop decimals.
 - Six choices to four spots
 - You must drag the proper decimals that would round to the corresponding places.

Drag and drop one number into each box. When you are finished, the number inside each box should match the number below the box when rounded to the nearest hundredth.

5.025	5.117		
5.066	5.079	5.103	5.108
5.07	5.08	5.10	5.11

- Notice that you have two choices that remain after you have placed the four decimals in their proper places.
- The “answer eliminator” does not work on this problem.

Grade 5 EOY (Question 7) Reading and Choosing

- You must be able to read the problem and choose the answer that correctly describes the figures.

Which explanation about figures is correct?

- A. All rhombuses are parallelograms. Parallelograms have 2 pairs of parallel sides. Therefore, all rhombuses have 2 pairs of parallel sides.
- B. All rhombuses are parallelograms. Parallelograms have exactly 1 pair of parallel sides. Therefore, all rhombuses have exactly 1 pair of parallel sides.
- C. Only some rhombuses are parallelograms. Parallelograms have 2 pairs of parallel sides. Therefore, only some rhombuses have 2 pairs of parallel sides.
- D. Only some rhombuses are parallelograms. Parallelograms have exactly 1 pair of parallel sides. Therefore, only some rhombuses have exactly 1 pair of parallel sides.

- Remember that you can use your highlighter and answer eliminator in the multiple choice problems!

Grade 5 EOY (Question 8) Not to Scale

- This problem involves the words “not to scale.” You must understand what this means. You must then place your answers in the two text boxes.

This table shows the three different ways that toy animals are packaged at a factory.

Package Type	Amount in the Package
Bag	36 toy animals
Box	48 bags
Crate	18 boxes



Bag
36 toy animals



Box
48 bags



Crate
18 boxes
not to scale

Part A

What is the total number of toy animals in one crate?

Enter your answer in the box.

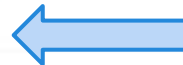
toy animals

Part B

One bag of toy animals weighs 12 ounces. What is the total weight, in ounces, of the bags of toy animals in one crate?

Enter your answer in the box.

ounces



Grade 5 EOY (Question 13)

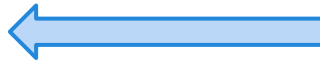
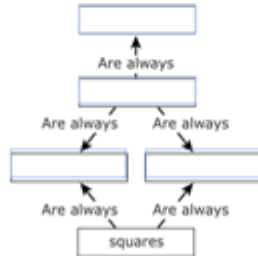
Relationships

- You must drag and drop to represent relationships that exist among figures.

Drag and drop the names to complete the diagram that shows the relationship among the figures listed.
Each category will be used only once.



- Drag from here . . .

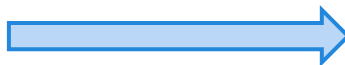
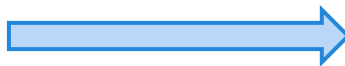


- To here . . .

Grade 5 EOY (Question 26) Graphing Points then Multiple Choice

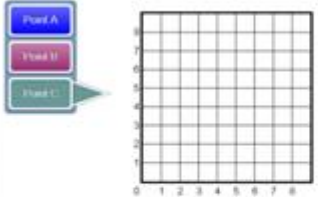
- You need to understand you may have to graph points and then answer a multiple choice problem that is related.

- You first must plot points by clicking on the appropriate color and following directions.
- You then have to answer the multiple choice question.



Part A

Graph Mai's scores for the first three rounds of play. Select the "Point A" button and plot Round 1. Select the "Point B" button and plot Round 2. Select the "Point C" button and plot Round 3. Be sure to graph all three points.



Part B

In Round 4, Mai scores the same number of points as in Rounds 2 and 3 combined. What is the coordinate pair that represents Mai's score for Round 4?

A. (4, 5)

B. (9, 4)

C. (5, 4)

D. (4, 9)

Grade 5 (Question 29) Three Drop Downs

- You may see three drop downs in one problem.

Select a phrase from each drop-down menu to correctly complete each sentence.

The product of $\frac{3}{5}$ and 4 is 4.

The product of $1\frac{1}{2}$ and 2 is 2.

The product of $\frac{5}{2}$ and $\frac{13}{4}$ is $\frac{13}{4}$.

Grade 5 EOY (Question 32) Three Correct Statements

- You may be asked for a total of 3 correct statements (of a possible 5).



Choose **three** statements that correctly describe the coordinate system.

- A. The x - and y -axes intersect at 10.
- B. The x - and y -axes intersect at the origin.
- C. The x - and y -axes are parallel number lines.
- D. The x - and y -axes are perpendicular number lines.
- E. The x - and y -coordinates are used to locate points in the coordinate plane.

- Notice the **bolded vocabulary**. It is your **roadmap to success**.

Grade 5 EOY (Question 33) Choose the Statement that is ALWAYS True

- You may see a question that asks you to choose the statement that is “always true.”

Which statement about the corresponding terms in both Pattern A and Pattern B is always true?

Pattern A: 0, 5, 10, 15, 20, 25, 30

Pattern B: 0, 10, 20, 30, 40, 50, 60

A. Each term in Pattern A is 3 times the corresponding term in Pattern B.

B. Each term in Pattern A is $\frac{1}{3}$ times the corresponding term in Pattern B.

C. Each term in Pattern A is 5 less than the corresponding term in Pattern B.

D. Each term in Pattern A is 10 less than the corresponding term in Pattern B.

- Notice the use of the answer eliminator.
- You must choose the answer that is “always true.”
- This means that the answer will hold true for each value in the patterns.

Grade 6 EOY (Question 2) Drag and Drop Words

- You need to know to drag and drop the words True, False, and Not Enough Information into the correct spaces. You have four spaces for three

Choices ...



The median number of points scored by 9 players in a basketball game is 12. The range of the number of points scored by the same basketball players in the same game is 7.

Drag and drop the correct word or phrase to each row of the table to indicate whether the statement is true, false, or does not contain enough information.

Statements	
At least one player scored 12 points.	<input type="text"/>
The greatest number of points scored could be 19 points.	<input type="text"/>
The mean number of points is greater than 12 points.	<input type="text"/>
If the greatest number of points scored is 16, then the least number of points scored is 4.	<input type="text"/>

Spaces ...

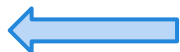
Grade 6 EOY (Question 5) Drag and Drop

- You need to know how to drag and drop items into the correct order on the number line.

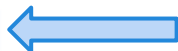
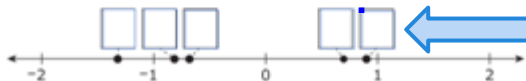
Before ...

Drag and drop the given rational numbers into the correct order on the number line from least to greatest.

$-\frac{2}{3}$ $\frac{7}{8}$ $-\frac{4}{5}$ $\frac{7}{10}$ $-\frac{4}{3}$



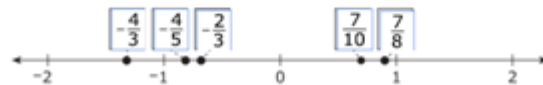
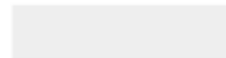
Drag from here ..



To here ...

After ...

Drag and drop the given rational numbers into the correct order on the number line from least to greatest.



- Notice how after you drag they disappear from the top box.
- You can't transfer from one of the small boxes to another; they must go back into the big box in order to make a change.

Grade 6 EOY (Question 10)

Histogram

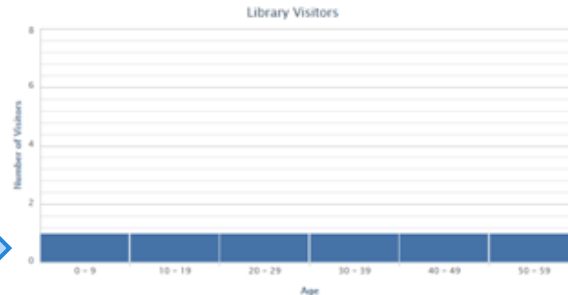
- Creating the Histogram
- You need to know how to drag the bottom sections upward in order to represent the data.

This table shows the ages of 20 visitors at a library.

15	27	53	9	48
3	56	12	10	15
18	15	2	31	20
21	33	6	52	56

Create a histogram that represents the data. Adjust the size of the slider by dragging the top of the slider to the appropriate height.

Drag from here!



Grade 6 EOY (Question 10)

Histogram

- Histogram
- You drag the graph to where it needs to be.

Notice also the use of the highlighter to ensure that all of the numbers were utilized on the graph.

This table shows the ages of 20 visitors at a library.

15	27	53	9	48
3	56	32	30	15
38	15	2	31	20
21	33	6	52	56



Create a histogram that represents the data. Adjust the size of the slider by dragging the top of the slider to the appropriate height.



Notice also that when you hover over a section (10-19), it will tell you how many visitors you have (6).

This table shows the ages of 20 visitors at a library.

15	27	53	9	48
3	56	32	30	15
38	15	2	31	20
21	33	6	52	56

Create a histogram that represents the data. Adjust the size of the slider by dragging the top of the slider to the appropriate height.



Grade 6 EOY (Question 1 Calculator Part) Three Drop Downs

- You need to utilize three drop downs and then enter your final answer in the text box.

Kellie bought 8 towels and spent \$39.60. Each towel costs the same amount.

Part A

Use the drop-down menus to create an equation that can be used to determine t , the price, in dollars, of 1 towel.

t = 

Part B

What is the price, in dollars, of 1 towel?

Enter your answer in the box.

\$

- Three separate drop downs.
- One is for the operation.
- Two contain numbers.

Grade 6 EOY (Question 1 Calculator Part) Three Drop Downs

- Drop down examples . . .

Kellie bought 8 towels and spent \$39.60. Each towel costs the same amount.

Part A

Use the drop-down menus to create an equation that can be used to determine t , the price, in dollars, of 1 towel.

t =

Part B

What is the price, in dollars, of 1 towel?

Enter your answer in the box.

\$

Operation drop down . . .

Kellie bought 8 towels and spent \$39.60. Each towel costs the same amount.

Part A

Use the drop-down menus to create an equation that can be used to determine t , the price, in dollars, of 1 towel.

t =

Part B

What is the price, in dollars, of 1 towel?

Enter your answer in the box.

\$

Number drop down . . .

Grade 6 EOY (Question 2 Calculator Part) Four Text Boxes

- Get ready for four separate text boxes to place answers into . . .

Part A

How many miles per hour did Chad drive?

Enter your answer in the box.

miles per hour

Part B

Chad will drive 672 more miles. He continues to drive at the same rate.

How many hours will it take Chad to drive the 672 miles?

Enter your answer in the box.

hours

Part C

Chad stopped and filled the car with 11 gallons of gas. He had driven 306 miles using the previous 11 gallons of gas.

How many miles per gallon did Chad's car get?

Enter your answer in the box.

miles per gallon

Part D

Chad's car continues to get the same number of miles per gallon.

How many gallons of gas will Chad's car use to travel 672 miles?

Enter your answer in the box.

gallons

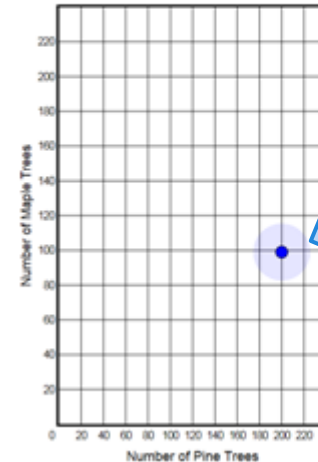
Grade 6 EOY (Question 3 Calculator Part) Navigating Coordinate Grid

- Know how to navigate a coordinate grid.
- You can only plot one point with a click.

- This problem is a great example of using the tools at the top.
- This problem has several key points that can be highlighted using the select tool.

A total of 300 trees will be planted in a park. There will be 2 pine trees planted for every 3 maple trees planted.

On the coordinate grid, select the point that represents the number of pine trees planted and the number of maple trees planted.



One point!

Grade 6 EOY (Question 4 Calculator Part) Text Box and a Toolbar

- This problem has a text box (Part A) and a toolbar portion (Part B).

A school band performed a concert on four different days. The band sold tickets and snacks each day of the concert for a fundraiser. The first table shows the number of tickets sold and the amount of money collected from ticket sales. The second table shows the number of snacks sold and the amount of money collected from snack sales.

Concert Ticket Sales

Day	Number of Tickets Sold	Amount Collected (dollars)
1	55	275.00
2	47	238.00
3	42	210.00
4	75	375.00

Snack Sales

Day	Number of Snacks Sold	Amount Collected (dollars)
1	43	53.75
2	26	45.00
3	68	75.00
4	45	61.25

Part A

If each snack costs the same price, what is the price per snack?


Enter your answer in the box.

\$

Part B

Write an equation that can be used to find y , the amount of money collected for selling x concert tickets.

Enter your equation in the box.



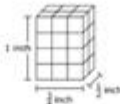
Part A

Part B

Grade 6 EOY (Question 10 Calculator Part) Two Toolbars

- This problem has two separate toolbar portions (Part A and Part B)

This right rectangular prism is built with small cubes.



Part A
What is the volume, in cubic inches, of the right rectangular prism?
Enter your answer in the space provided. Enter only your fraction.

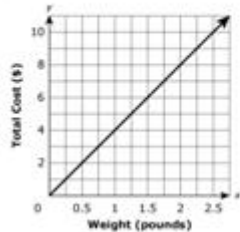
Part B
What is the volume, in cubic inches, of 1 of the small cubes?
Enter your answer in the space provided. Enter only your fraction.

The image shows two calculator interface sections, Part A and Part B. Each section includes a toolbar with mathematical symbols (pi, square root, percent, divide, multiply, add, subtract, equals, undo, redo, clear) and a list of categories on the right: Numbers, Arithmetic and Units, Exponents and Roots, Relations, Geometry, and Groups. The input fields for both parts are currently empty.

Grade 7 EOY (Question 1) Two Vocabulary

- You will need to pay attention to more than one bolded word in a question. (There are 2)

This graph shows the relationship between the pounds of cheese bought at a deli and the total cost, in dollars, for the cheese.



Select **each** statement about the graph that is true. Select **all** that apply.

- A. The point $(0, 0)$ shows the cost is \$0.00 for 0 pounds of cheese.
- B. The point $(0.25, 1)$ shows the cost is \$0.25 for 1 pound of cheese.
- C. The point $(0.5, 2)$ shows that 0.5 pound of cheese costs \$2.00.
- D. The point $(1, 4)$ shows the cost is \$4.00 for 1 pound of cheese.
- E. The point $(2, 8)$ shows that 8 pounds of cheese cost \$2.00.

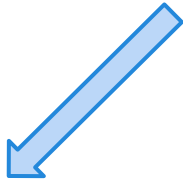
- You must not only select “each” statement that is true, but you must also select “all” that apply.
- Notice the use of the highlighter to make each bold word stand out.

Grade 7 EOY (Question 3) Decimal

- You must know to utilize the . key to represent the answer as a decimal.
- If you use anything but a decimal, the words “invalid input” will appear.

This table shows a proportional relationship between x and y .

x	y
2	1.25
4	2.5
6	3.75
10	6.25



Invalid ...

What is the **invalid input** of proportionality between x and y ? Enter your answer as a decimal.

This table shows a proportional relationship between x and y .

x	y
2	1.25
4	2.5
6	3.75
10	6.25

Valid ...

What is the constant of proportionality between x and y ? Enter your answer as a decimal.

 x

Grade 7 (Question 6 Calculator Part) Text Box then Two Drop Downs

- You may see a text box first and then 2 drop downs.

The students in Naomi's class sold calendars for a fund-raiser this year and last year.

This year, the selling price of each calendar was \$13.25.

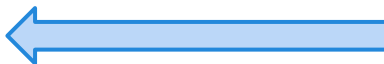
The price this year represents 6% more than the selling price of each calendar last year.

Part A

What was the selling price of each calendar last year ?

Enter your answer in the box.

\$



Part B

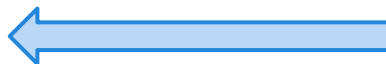
The students in Naomi's class earned 20% of the selling price of each calendar sold this year and last year.

- At last year's selling price, Naomi's class sold 650 calendars.
- At this year's selling price, Naomi's class sold 600 calendars.

Select a choice from each drop-down menu to make this statement true.

The students in Naomi's class earned more money from the fund-raiser

Choose... by Choose...



- First the text box
- ...
- Then the drop downs ...
 - Choose the year
 - Choose the \$

Grade 7 EOY (Question 11 Calculator Part) Multiple Clicks

- Recognize that you will have to make choices in clicking answers. All or none could be correct or a mix in the middle.

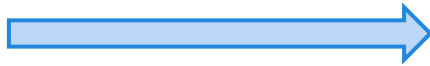
Misha has a cube and a right-square pyramid that are made of clay. She placed both clay figures on a flat surface.

Select each box in the table that identifies the two-dimensional-plane sections that **could** result from a vertical or horizontal slice through each clay figure.

Clay Figure	Cube	Right-Square Pyramid
Triangle	<input type="checkbox"/>	<input type="checkbox"/>
Square	<input type="checkbox"/>	<input type="checkbox"/>
Rectangle That Is Not a Square	<input type="checkbox"/>	<input type="checkbox"/>

Grade 8 EOY (Question 3) Select All

- You must know you need to “Select all that apply.”



Two lines are graphed on the same coordinate plane. The lines only intersect at the point $(3, 6)$. Which of these systems of linear equations could represent the two lines?

Select **all** that apply.

A $\begin{cases} x = 3 \\ y = 6 \end{cases}$

B $\begin{cases} x = 6 + y \\ y = 3 + x \end{cases}$

C $\begin{cases} y = 3x - 3 \\ y = x - 1 \end{cases}$

D $\begin{cases} x = 3 + y \\ y = 6 + x \end{cases}$

E $\begin{cases} y = x + 3 \\ y = 2x \end{cases}$

Pay attention to the bold! You need to understand that you have the ability to select multiple answers! Select all that apply!

Grade 8 EOY (Question 4) Select Each Correct Statement

- You need to know that you need to “Select each correct statement.”

A relationship between x and y is defined by the equation $y = -\frac{4}{3}x + \frac{1}{3}$, where x is the input and y is the output. Which statements about the relationship are true?

Select **each** correct statement.

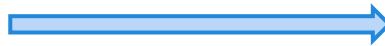
- A. y is a function of x .
- B. The graph of the relationship is a line.
- C. When the input is -3 , the output is 4 .
- D. When the input is -2 , the output is 3 .
- E. The y -intercept of the relationship is $(0,1)$.

You must read to know that you can click more than one correct statement. You must select all that exist!

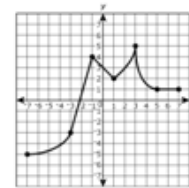
Grade 8 EOY (Question 6) Table

- You need to know that there is a table, and for each interval you must choose the correct choice horizontally.

Each interval must be chosen going horizontally for all six intervals.



The graph shows y as a function of x .



For each interval in the table, indicate whether the function is increasing, decreasing, or neither increasing nor decreasing over the interval.

Interval	Increasing	Decreasing	Neither increasing nor Decreasing
$-7 < x < -3$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$-3 < x < 1$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$-1 < x < 1$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$1 < x < 3$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$3 < x < 5$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$5 < x < 7$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Grade 8 EOY (Question 7) Table

- You need to know that there is a table, and you must choose the correct answer vertically.

The table shows two systems of linear equations.

Indicate whether each system of equations has no solution, one solution, or infinitely many solutions by selecting the correct cell in the table. Select one cell per column.

System of Equations	$\begin{cases} y = -x \\ 8y = -8x \end{cases}$	$\begin{cases} y = (3x + 1) \\ y = -4 \end{cases}$
No Solution	<input type="checkbox"/>	<input type="checkbox"/>
One Solution	<input type="checkbox"/>	<input type="checkbox"/>
Infinitely Many Solutions	<input type="checkbox"/>	<input type="checkbox"/>

You must read and know to work vertically for each of the equations!

Grade 8 EOY (Question 11) Two Text Boxes

- You need to understand how to manipulate the text boxes.

A system of equations is shown.

$$\begin{cases} x = 10 \\ 3x + 5y = 20 \end{cases}$$

What is the solution (x, y) of the system of equations?

Enter your answers in the boxes.

(,)

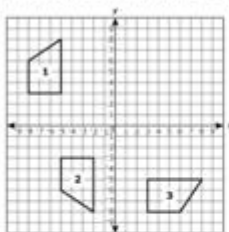
1

2

Grade 8 EOY (Question 12) Two Sets of Two Drop Downs

- You need to know that there is a Part A (2 drop downs with 3 choices) followed by a Part B (same).

Three congruent figures are shown on the coordinate plane.



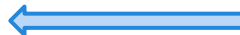
Part A

Select a transformation from each drop-down menu to make the statement true.

Figure 1 can be transformed onto figure 2 by

Choose... followed by

Choose...



A

Part B

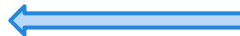
Figure 3 can also be created by transforming figure 1 with a sequence of two transformations.

Select a transformation from each drop-down menu to make the statement true.

Figure 1 can be transformed onto figure 3 by

Choose... followed by

Choose...



B

Grade 8 EOY (Question 16)

- You need to know that you must click “Line s” first; this will allow you to plot two separate points on the coordinate plane (which will appear in blue; this is the same color as the “Line s box.”
- You then need to know to do the exact same thing for “Line t.”

Grade 8 EOY (Question 16 Still!)

- You then need to know that you must click on the “Point P” section and then plot on the graph using the directions as listed.
- This problem involves you reading the full directions.
- It then involves you utilizing three separate functions in order to solve the problem.

Grade 8 EOY (Question 16 Still!)



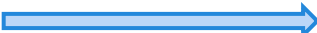
- Here is a clean picture.

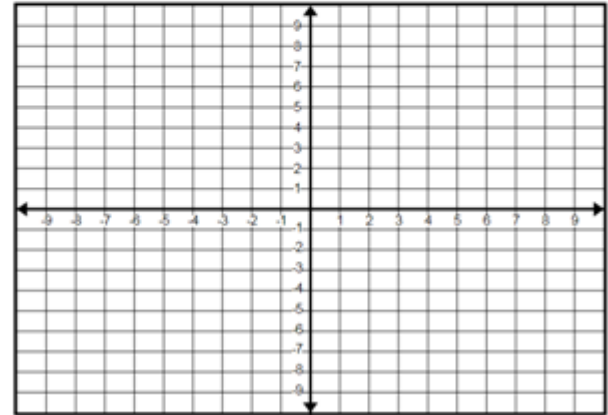
The equation of line s is $y = \frac{1}{3}x - 3$.

The equation of line t is $y = -x + 5$.

The equations of lines s and t form a system of equations. The solution to the system of equations is located at point P .

To graph a line, select Line s and plot two points on the coordinate plane. A line will be drawn through the points. In similar fashion, select Line t and plot two points on the coordinate plane. A line will be drawn through the points. Select Point P and plot the point on the coordinate plane.

1st 
2nd 
3rd 



Grade 8 EOY (Question 2 Calculator Part) Multiple Choice and Toolbar

- This question has a multiple choice (Part A) and a toolbar portion.
(Part B).

Filpo is building a rectangular sandbox for his younger brother. The length of the sandbox is 1 foot longer than twice the width of the sandbox. The perimeter of the sandbox is 29 feet.

Part A

Which equation could be used to determine w , the width, in feet, of the sandbox?

- A. $w + w + 2 = 29$
- B. $w + 2w + 1 = 29$
- C. $2w + 2(w + 2) = 29$
- D. $2w + 2(2w + 1) = 29$

Part B

What is the width, in feet, of the sandbox?

Enter your answer in the space provided.

The image shows a calculator interface. At the top is a toolbar with various mathematical symbols and functions: a circular arrow for undo, a circular arrow for redo, a left arrow for undo, a plus sign, a minus sign, a multiplication sign, a division sign, a fraction template, a decimal template, a power function, a square root function, an equals sign, and an approximation symbol. Below the toolbar is a large empty input box for the answer. To the right of the input box is a dropdown menu with the following options: Numbers, Arithmetic and Units, Exponents and Roots, Relations, Geometry, and Groups.

Grade 8 EOY (Question 4 Calculator Part) Four Part Question

- This question has four parts.

- Part A Text Box
- Part B Two Drop Downs
- Part C Two Text Boxes
- Part D Text Box

A school is selling t-shirts and sweatshirts for a fund-raiser. The table shows the number of t-shirts and the number of sweatshirts in each of three recent orders. The total cost of orders A and B are given. Each t-shirt has the same cost, and each sweatshirt has the same cost.

Order	Number of T-shirts	Number of Sweatshirts	Total Cost of Order (dollars)
A	2	2	30
B	3	1	35
C	1	2	?

The system of equations shown can be used to represent this situation.

$$\begin{cases} 2x + 3y = 30 \\ 3x + y = 35 \end{cases}$$

Part A
What is the total cost of 1 t-shirt and 1 sweatshirt?
Enter your answer in the box.

Part B
Select a choice from each drop-down menu to correctly complete the statement.
In the system of equations, x represents
Choice and y represents
Choice

Part C
If the system of equations is graphed in a coordinate plane, what are the coordinates (x, y) of the intersection of the two lines?
(,)

Part D
What is the total cost, in dollars, of order C?
\$

Grade 8 EOY (Question 7 Calculator Part)

- This question has four parts.
- Even with minimizing the screen (Control - and +), you will have to navigate around the screen in order to see all of the parts.
- There is a Part A (grid a point)
- Parts B-D are multiple choice

Grade 8 EOY (Question 7 Calculator Part)

- Here is a picture . . .
 - Please notice how even at this zoom out stage that all of the problem is not visible for you.
 - You will have to understand how to maneuver around this problem.

The amount of water remaining in the pool at the end.

Hours Draining	0	1	2	3	4	5
Water Remaining (gallons)	15,000	10,000	5,000	0,000	0,000	0,000

Part A
Plot the points that show the relationship between the number of hours elapsed and the number of gallons of water left in the pool.
Label x-axis as the pool's pool water pool.

Part B
The table suggests a linear relationship between the number of hours the pool had been draining and the number of gallons of water remaining in the pool. Assuming the relationship is linear, what does the rate of change represent in the context of this relationship?
 A. The number of gallons of water in the pool after 1 hour.
 B. The number of hours it took to drain 1 gallon of water.
 C. The number of gallons drained each hour.
 D. The number of gallons of water in the pool when it is full.

Part C
What does the y-intercept of the linear function represent in the context of this relationship?
 A. The number of gallons of water in the pool after 1 hour.
 B. The number of hours it took to drain 1 gallon of water.
 C. The number of gallons drained each hour.
 D. The number of gallons of water in the pool when it is full.

Part D
Which equation describes the relationship between the time elapsed and the number of gallons of water remaining in the pool?
 A. $y = -3000x + 15,000$
 B. $y = -3000x + 10,000$
 C. $y = -3,000x + 15,000$
 D. $y = -3,000x + 10,000$

Grade 8 EOY (Question 10 Calculator Part) Moving Boxes

- This problem involves the moving of three separate boxes (Function A - B - C)

Functions A, B, and C are linear functions.

Some values of Function A are shown in the table.

Function A

x	y
3	3
5	7
6	9

The graph of Function B has a y -intercept of $(0, 3)$ and an x -intercept of $(-5, 0)$.

Function C is defined by the equation $y = (3x + 1)$.

Order the linear functions based on rate of change, from least to greatest.

Least Rate of Change

Greatest Rate of Change

Function A Function B Function C

Functions A, B, and C are linear functions.

Some values of Function A are shown in the table.

Function A

x	y
3	3
5	7
6	9

The graph of Function B has a y -intercept of $(0, 3)$ and an x -intercept of $(-5, 0)$.

Function C is defined by the equation $y = (3x + 1)$.

Order the linear functions based on rate of change, from least to greatest.

Least Rate of Change

Greatest Rate of Change

Function B Function C Function A

Notice how the Function C is moving. You need to drag it on a linear path to move the box. It is currently being moved to the "Greatest Rate of Change."