END OF COURSE TEST FACTS

9-12 Math: Algebra and Geometry

Question Types

- Multiple Choice
  - select the one correct answer
- Editing Task Choice
  - select answer from drop-down menu
- Multi-Select
  - select all correct answers (more than 1)
- Selectable Hot Text
  - Highlight correct answers (could be just 1 or more than 1)
- Graphing Response Item Display
  - use point, line, and arrow tools to graph
- Matching
  - check a box to indicate matching information from columns and rows
- Equation Editor
  - type your answer in the response box

Questions could contain a combination of the types above

More Info:

For more detailed information including sample questions, please visit:

https://fsassessments.org/families.html

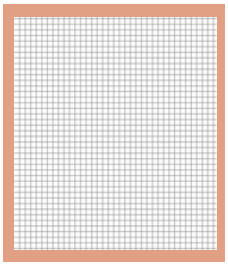
Number of Questions

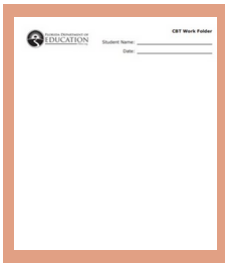
Both the Algebra 1 and Geometry tests contain 45-50 questions. Students will take the test in one session.

Student Tools

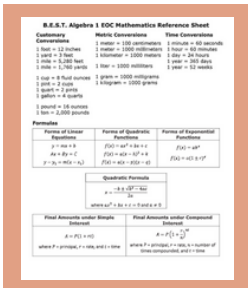
Students can use the online or a handheld **scientific calculator**.

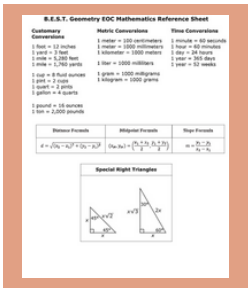
Students will receive a work folder containing **blank paper** and **graph paper**.





Students can use the online or hard copy **reference sheet**.

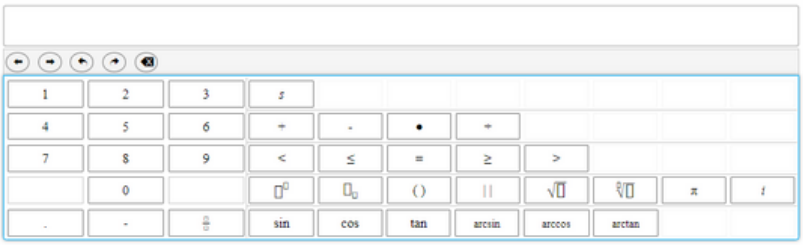




ITEM TYPE EXAMPLES

Doug has 8 square pieces of wood. Each piece of wood has a side length of s centimeters. The total area of all 8 pieces of wood is 200 square centimeters.

Create a quadratic equation Doug can use to find the side length of each piece of wood.



Equation Editor Example

A table of values for a linear function is shown.

x	$f(x)$
−1	−8
3	0
6	6

Match each key feature of the graph to its value.

	−6	$\frac{1}{2}$	2	3	6
x-intercept	☐	☐	☐	☐	☐
y-intercept	☐	☐	☐	☐	☐
rate of change	☐	☐	☐	☐	☐

Matching Example

A band sells x premium tickets and y regular tickets for a concert.

- A premium ticket costs $20.
- A regular ticket costs $5 less than a premium ticket.
- The band raises $2145 from selling tickets.

Select coefficients to complete the equation representing the relationship between x and y.

[ ] x + [ ] $y = 2145$

5
15
20
25

Editing Task Example

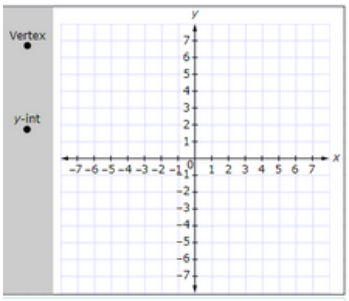
The equation for the function f is shown.

$f(x) = -\frac{1}{2}x + 3$

The quadratic function g has the following properties:

- g has a lesser y-intercept than f.
- The maximum value and y-intercept of g are not equal.
- First g increases, and then it decreases.

Drag the vertex and y-intercept labels to show possible locations for the vertex and y-intercept of g.



Graphic Response Item Display Example

Angelo transforms rectangle $PQRS$ into rectangle $JKLM$. The corresponding sides of rectangles $PQRS$ and $JKLM$ are **not** congruent.

Select all the transformations that Angelo could have used.

- ☐ $(x, y) \rightarrow (y, x)$
- ☐ $(x, y) \rightarrow (3x, 3y)$
- ☐ $(x, y) \rightarrow (-y, x)$
- ☐ $(x, y) \rightarrow (1.5x, 1.5y)$
- ☐ $(x, y) \rightarrow (x - 2, y + 3)$

Multi Select Example

Which linear equation best models the scatter plot?

Ⓐ $y = \frac{2}{3}x + 19$

Ⓑ $y = \frac{6}{8}x + 25$

Ⓒ $y = \frac{3}{2}x + 19$

Ⓓ $y = \frac{8}{6}x + 25$

Multiple Choice Example

Select one angle from each column to show a pair of angles that represents a counterexample.

Angle 1	Angle 2
∠ FGH	∠ FGH
∠ FGM	∠ FGM
∠ PMG	∠ PMG
∠ PMO	∠ PMO
∠ HGI	∠ HGI
∠ IGM	∠ IGM
∠ KMG	∠ KMG
∠ KMO	∠ KMO

Selectable Hot Text Example