Task Model 1

Response Type:
Multiple Choice, single correct response

DOK Level 1

A-REI.D.10
Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

Evidence Required:
1. The student understands that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

Tools: Calculator

Version 3 Update:
Edited TM1a Example Stem 1 – same graph; different question and options.

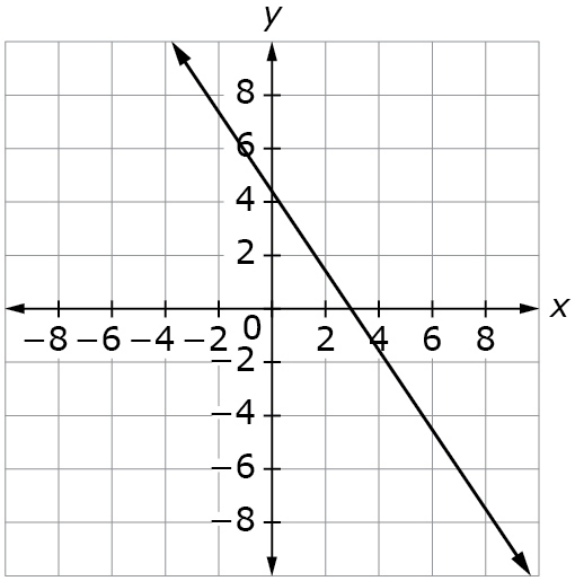
Prompt Features: The student is presented with a graph in the coordinate plane and prompted to identify a solution to the equation represented by the graph.

Stimulus Guidelines:

- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- Item difficulty can be adjusted by:
  - using integer or real numbers in the solution set
  - changing the graph representation to either contain the point that is a solution to the graph or extend beyond the pictured graph

TM1a
Stimulus: The stem will present a graph in the coordinate plane and ask the student to select an ordered pair, or the coordinate of an ordered pair, that is a solution to the equation represented by the graph.

Example Stem 1: If $x=n$ then $y=6$ is a solution to the equation represented by the graph shown.

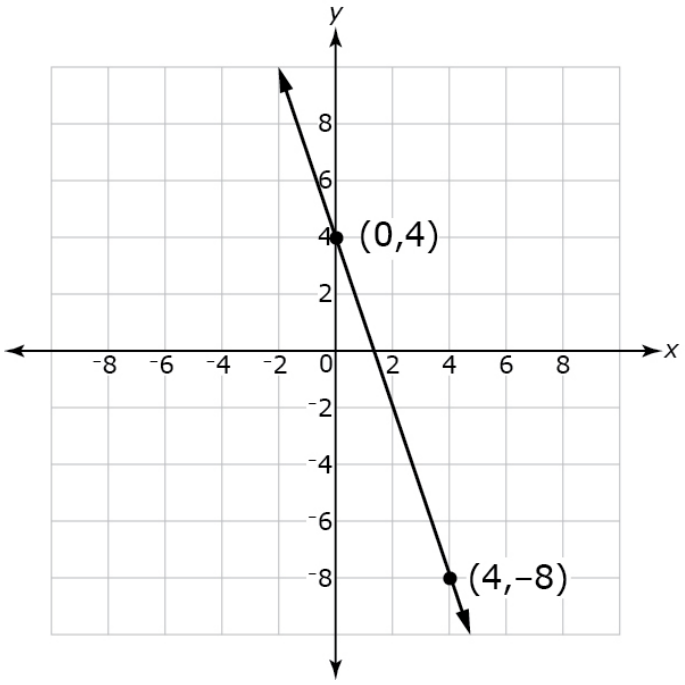


What is the approximate value of n?

A. −13.5
B. −1
C. 4.5
D. 7

Rubric: (1 point) The student identifies the correct value of n (e.g., B).

Response Type: Multiple Choice, single correct response

Task Model 1 **Response Type: Equation/Numeric** **DOK Level 1** **A-REI.D.10** Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line). **Evidence Required:** 1. The student understands that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line). **Tools:** Calculator **Version 3 Update:** Edited TM1b Example Stem 2 – same graph with two labeled points; different question and changed to an equation/numeric response type (from multiple choice).	**Example Stem 2:** If (8, *b*) is a solution to the equation represented by the graph below, what is the value of *b*?  **Rubric:** (1 point) The student enters the correct value for *b* (e.g., –20). **Response Type:** Equation/numeric

Task Model 1

Response Type:
Multiple Choice, single correct response

DOK Level 2

A-REI.D.10
Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

Evidence Required:
1. The student understands that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

Tools: Calculator

Version 3 Update:
Edited TM1b Example Stem 1 – same graph; different question and options. Added a second example stem 2.

Prompt Features: The student is prompted to determine the correct statement about the solution set of a given graph.

Stimulus Guidelines:
- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes or no grid with no scale.
- Item difficulty can be adjusted by:
  - varying the order of the equation
  - using integers or real numbers in solution set
  - changing the point so it is contained in the part of the graph that is visible or contained in the part of the graph that is not visible

TM1b
Stimulus: The student is presented with a graph and its equation.

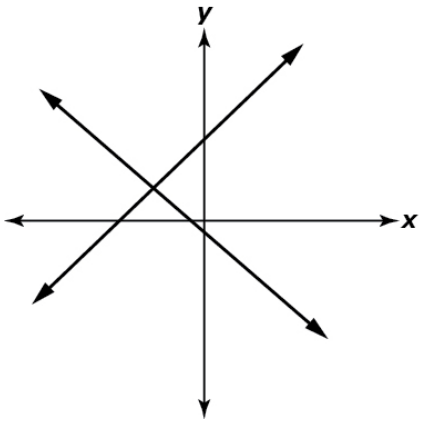
Example Stem 1:
This graph represents the equation $y = 0.5^{(x-5)}$.

How many ordered pairs (x, y) for $1 < x < 9$ satisfy this equation?

A. No ordered pairs
B. Exactly one ordered pair
C. Exactly two ordered pairs
D. An infinite number of ordered pairs

Rubric: (1 point) Student selects the correct statement about the number of ordered pairs (D).

Response Type: Multiple Choice, single correct response

Task Model 1 **Response Type:** **Multiple Choice, single correct response** **DOK Level 2** **A-REI.D.10** Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line). **Evidence Required:** 1. The student understands that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line). **Tools:** Calculator **Version 3 Update:** Edited TM1b Example Stem 1 – same graph; different question and options. Added a second example stem 2.	**Example Stem 2:** The graph of a system of linear equations is shown below.  How many solutions does this system of equations have? A. No solutions B. Exactly one solution C. Exactly two solutions D. An infinite number of solutions **Rubric:** (1 point) Student selects the correct statement about the number of solutions (B). **Response Type:** Multiple Choice, single correct response

Task Model 1

Response Type:
Hot Spot

DOK Level 2

A-REI.D.10
Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

Evidence Required:
1. The student understands that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

Tools: Calculator

Version 3 Update:
Edited TM1c Example Stem 1 – same graph; edited stem and directions for showing the solution(s).

Accessibility Note:
Hot Spot items are not currently able to be Brailled. Minimize the number of items developed to this TM.

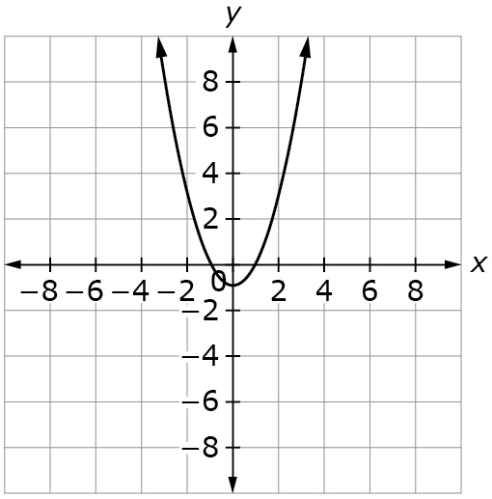
Prompt Features: The student is presented with given the graph of a function *f* and prompted to find the approximate values of the solution of an equation of the form $f(x)=a$, where *a* is a real number.

Stimulus Guidelines:

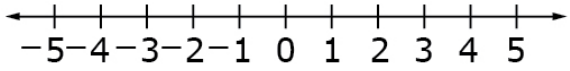
- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- Functions can be linear, quadratic, cubic, absolute value, or exponential.
- The value of the coordinates cannot be any closer to the endpoints than ¼ of the value of the interval.
- Item difficulty can be adjusted by:
  - the degree of the given polynomial function
  - the number of intervals the student is required to select

TM1c
Stimulus: The student is presented with a graph of a polynomial *p* and equation of the form $a=p(x)$, where a is a real number.

Example Stem 1:
p is a quadratic function. The graph of $y = p(x)$ is shown.



Select one or more intervals with consecutive integer endpoints that contain the solution(s) of the equation $13=p(x)$.



Interaction: The student selects the correct consecutive integer interval(s) on the number line. The student can only select up to the number of solutions the equation has.

Task Model 1

Response Type:
Hot Spot

DOK Level 2

A-REI.D.10
Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

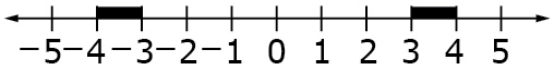
Evidence Required:
1. The student understands that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

Tools: Calculator

Version 3 Update:
TM1c Example Stem 2 – same graph; edited stem and directions for showing the solution(s).

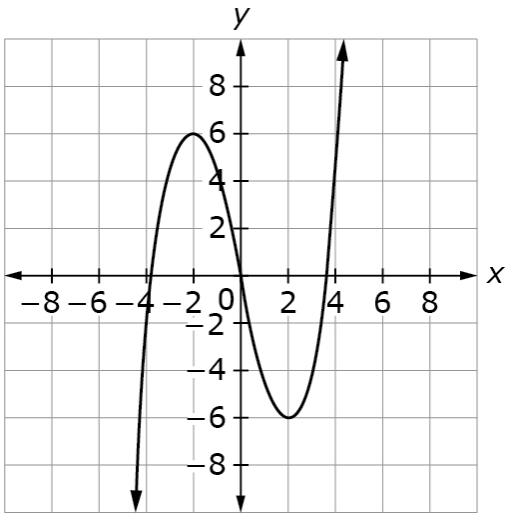
Accessibility Note:
Hot Spot items are not currently able to be Brailled. Minimize the number of items developed to this TM.

Rubric: (1 point) The student chooses only the correct consecutive integer intervals:

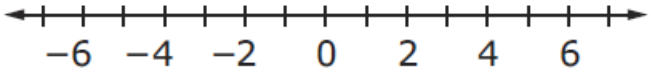


Response Type: Hot spot

Example Stem 2: *p* is third degree polynomial. The graph of $y = p(x)$ is shown.

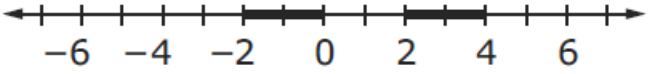


Select one or more intervals with consecutive even integer endpoints that contain the solution(s) of the equation 2=*p*(x).



Interaction: The student chooses interval(s) between two tick marks on the number line. The student can only select up to the number of solutions the equation has.

Rubric: (1 point) The student correctly identifies the intervals that contain the solution to the equation.



Response Type: Hot Spot

Task Model 1

Response Type:
Multiple Choice, single correct response

DOK Level 2

A-REI.D.10
Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

Evidence Required:
1. The student understands that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).

Tools: None

Version 3 Update:
Task Model 1d added.

Prompt Features: The student is prompted to determine the correct graph given an equation.

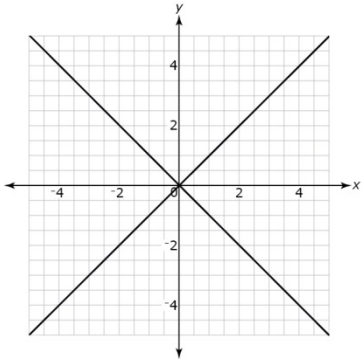
Stimulus Guidelines:

- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- Functions can be linear, quadratic, cubic, absolute value, or exponential.
- Item difficulty can be adjusted by:
  - using integers or real numbers
  - using functions where y is not a function of x (e.g., circles)
- Given equations should not be presented in $y=f(x)$ form to encourage substitution and distinguish from items at F-IF.7.

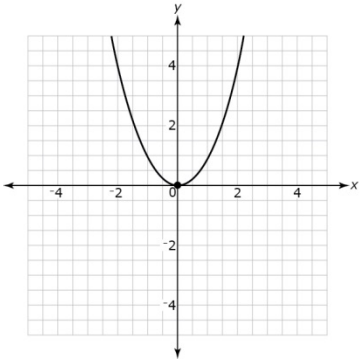
TM1d
Stimulus: The student is presented with an equation in two variables.

Example Stem:
Which graph represents the equation $x^2 + y^2 = 1$?

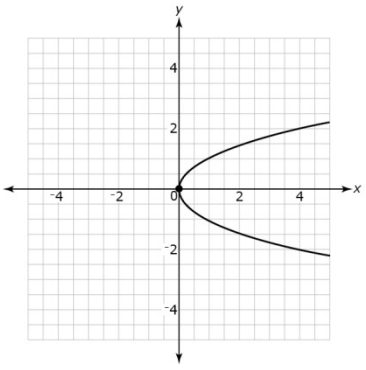
A.



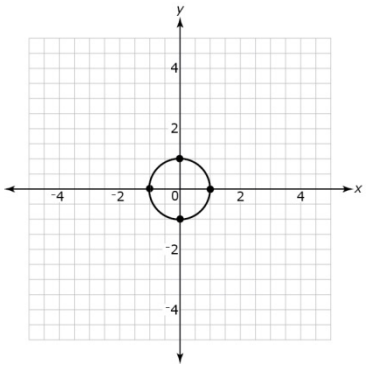
C.



B.



D.



Rubric: (1 point) Student selects the correct graph to match the equation (e.g., A).

Development Note: With distractors, care should be taken to ensure that they share some common points with the key.

Response Type: Multiple Choice, single correct response

Task Model 2

Response Type: Equation/Numeric

DOK Level 1

A–REI.D.11

Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.

Evidence Required:
2. The student finds solutions (either exact or approximate as appropriate) to the equation $f(x) = g(x)$ using technology to graph the functions, make tables of values, or find their successive approximations.

Tools: Calculator

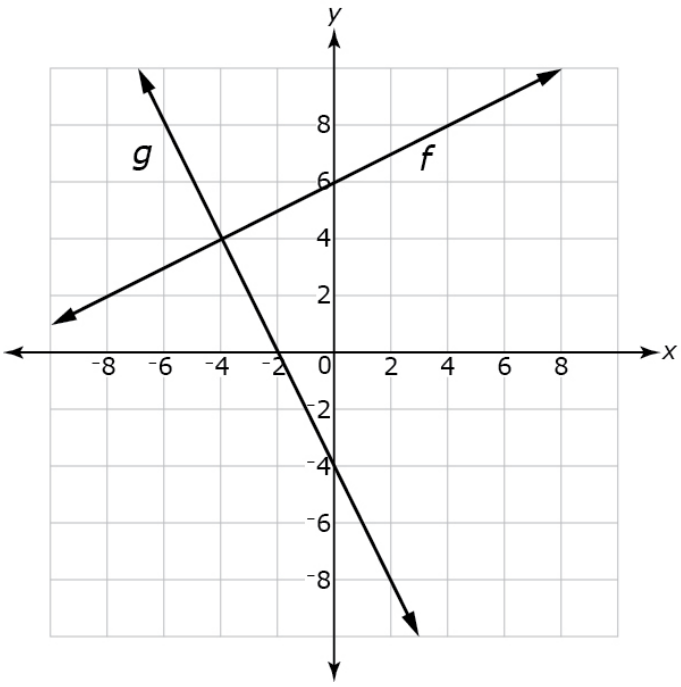
Prompt Features: The student is prompted to identify the solution to an equation of the form $f(x)=g(x)$ given the graphs of *f* and *g*.

Stimulus Guidelines:

- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- Item difficulty can be adjusted by varying the order of the functions graphed.

TM2a
Stimulus: The student is presented with a graph in the coordinate plane of two intersecting functions. The functions may or may not be identified.

Example Stem: The graphs of the linear functions *f* and *g* are shown.



Enter the solution to the equation $f(x) = g(x)$.

Rubric: (1 point) The student correctly enters the *x*-coordinate(s) of the point(s) where the graph of the two functions intersect (e.g., –4).

Allow a tolerance of ± 0.25 for scoring.

Response Type: Equation/Numeric

Task Model 2

Response Type: Multiple Choice, multiple correct response

DOK Level 1

A–REI.D.11

Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.

Evidence Required:
2. The student finds solutions (either exact or approximate as appropriate) to the equation $f(x) = g(x)$ using technology to graph the functions, make tables of values, or find their successive approximations.

Tools: Calculator

Version 3 Update: Task Model 2b edited to ask for the "**two** closest approximations…"

Prompt Features: The student is prompted to select the solution(s) to the equation $f(x) - g(x) = 0$.

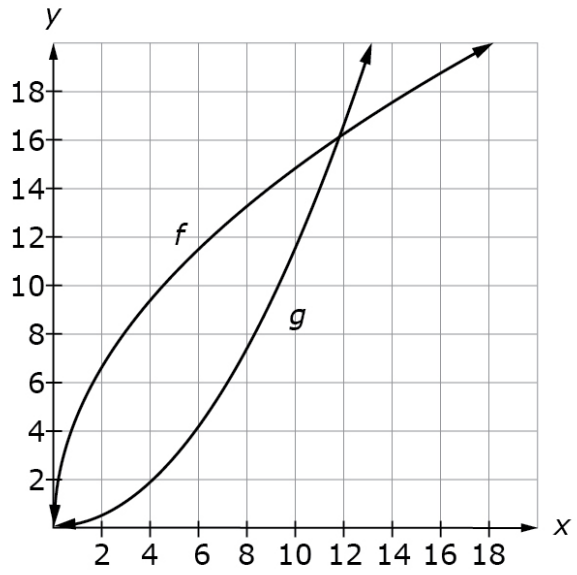
Stimulus Guidelines:

- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- Item difficulty can be adjusted by varying the order of the functions graphed.

TM2b
Stimulus: The stem will present the graph of two functions and ask for the student to select the solution to the equation $f(x) - g(x) = 0$.

Example Stem 2: The graphs of the functions *f* and *g* are shown, where:

- $f(x) = 4.5\sqrt{x}$
- $g(x) = \left(\frac{1}{9}\right)x^2$



Select the **two** closest approximations for solutions to the equation $f(x) - g(x) = 0$.

A. $x = 0$
B. $x = 5.0$
C. $x = 11.7$
D. $x = 13.5$
E. $x = 20.0$

Rubric: (1 point) The student correctly selects the solutions to the equation (e.g., A, C).

Response Type: Multiple Choice, multiple correct response

Task Model 2

Response Type: Equation/Numeric

DOK Level 1

A–REI.D.11
Explain why the *x*-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.

Evidence Required:
2. The student finds solutions (either exact or approximate as appropriate) to the equation $f(x) = g(x)$ using technology to graph the functions, make tables of values, or find their successive approximations.

Tools: Calculator

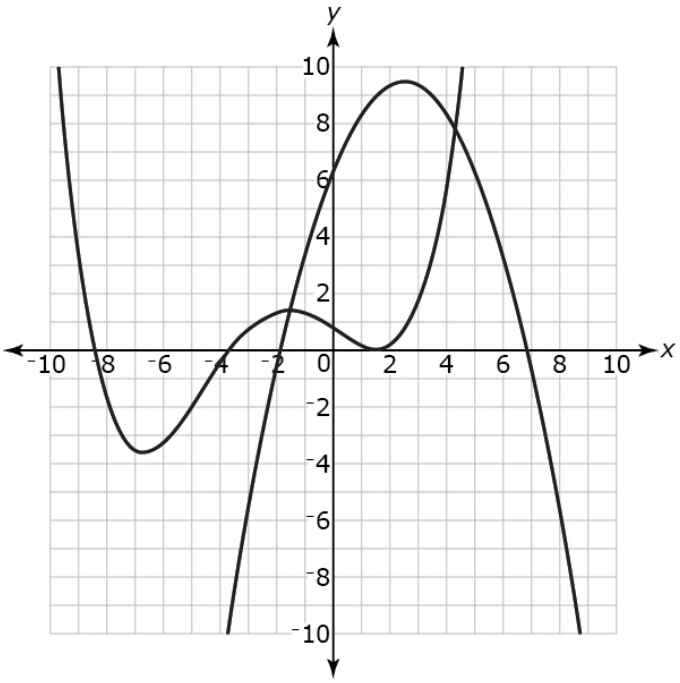
Version 3 Update:
Task Model 2c retired. Task Model 2d edited to ask for the number of solutions and enter one.

Prompt Feature: Identify approximate solutions for $f(x) = g(x)$ from the graph of the equations $y = f(x)$ and $y = g(x)$.

Stimulus Guidelines:
- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- Item difficulty can be adjusted by varying the complexity of the functions graphed.

TM2d
Stimulus: The student is presented with the graphs of two functions, *f* and *g,* where the *x*-coordinates of the intersection points are not integers.

Example Stem: The graphs of two polynomial functions *f* and *g* of degree 2 and degree 4 are shown.



How many solutions are there to the equation $f(x) = g(x)$?
Enter your answer in the first response box.

Enter **one** of the solutions to the equation $f(x) = g(x)$ to the nearest 0.5 in the second response box.

Rubric: (2 points) Student identifies that there are 2 solutions to the equation $f(x) = g(x)$ and enters one of them to the nearest 0.5 (e.g., -1.5+/-0.4 or 4.5+/-0.4).

Response Type: Equation/numeric; 2 response boxes

Task Model 2

Response Type: Matching Tables

DOK Level 2

A–REI.D.11

Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.

Evidence Required:
2. The student finds solutions (either exact or approximate as appropriate) to the equation $f(x) = g(x)$ using technology to graph the functions, make tables of values, or find their successive approximations.

Tools: Calculator

Version 3 Update: Task Model 2e retired. New Task Model 2f writtern that is fully accessible.

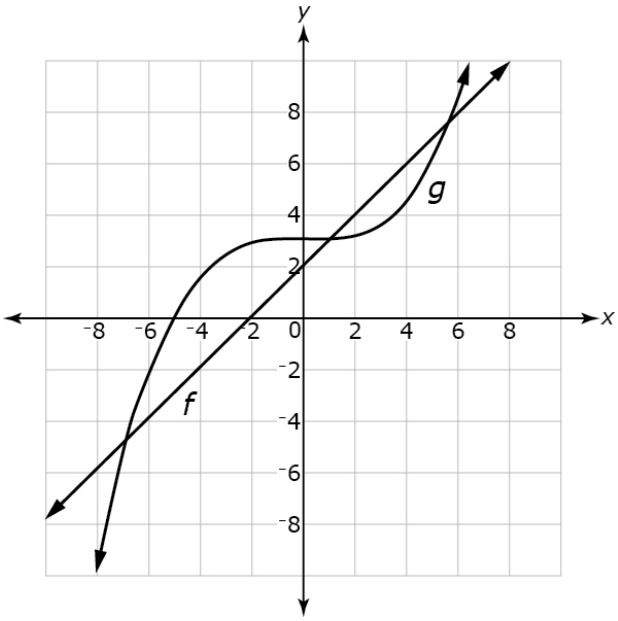
Prompt Features: Given the graphs of the functions *f* and *g*, the student is prompted to indicate whether statements about the functions and their graphs are true or false.

Stimulus Guidelines:

- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- Item difficulty can be adjusted by varying the complexity of the graphs.

TM2f
Stimulus: The student is presented with graphs of two functions that intersect. Functions may or may not be identified.

Example Stem: The graphs of $y = f(x)$ and $y = g(x)$ are shown.



Indicate whether each statement about these graphs is true or false.

	True	False
$f(-4) < g(-4)$		
$x=1$ is the approximate value of a solution to $f(x) = g(x)$		
$x=0$ is the approximate value of a solution to $f(x) = g(x)$		
$x=-7$ is the approximate value of a solution to $f(x) = g(x)$		

Rubric: (1 point) Student answers each statement correctly (e.g., T,T,F,T).

Response Type: Matching Tables (T/F)

Task Model 3

Response Type:
Multiple Choice, single correct response

DOK Level 1

A–REI.D.12

Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Evidence Required:
3. The student graphs the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality).

Tools: None

Prompt Features: Given a linear inequality in two variables, the student is prompted to select the corresponding graph.

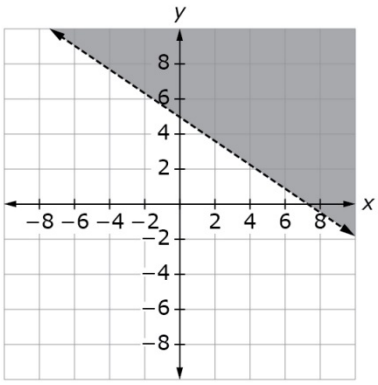
Stimulus Guidelines:

- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- Item difficulty can be adjusted by:
  - varying the level of algebra necessary to obtain a form of the given inequality that can be graphed
  - using integer, rational, or real variable coefficients or constants

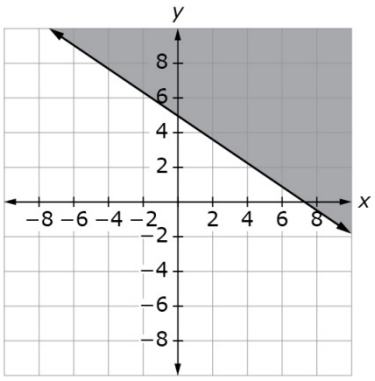
TM3a:
Stimulus: The student is presented with a linear inequality in two variables.

Example Stem: Select the graph that shows the solution set of the linear inequality, $y > -\frac{2}{3}x + 5$.

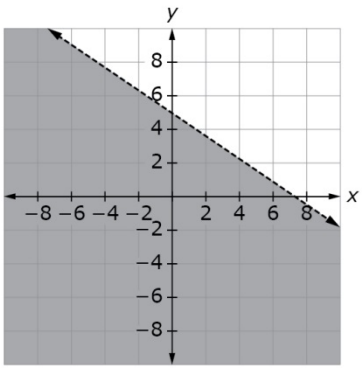
A.



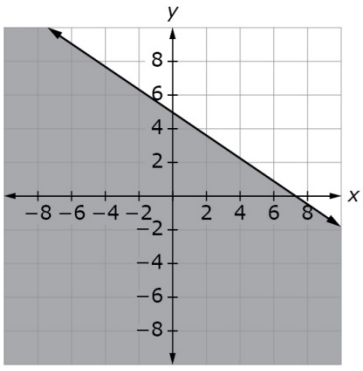
C.



B.



D.



Rubric: (1 point) Student selects the graph for the linear inequality (e.g., A).

Response Type: Multiple Choice, single correct response

Task Model 3

Response Type:
Equation/Numeric

DOK Level 2

A–REI.D.12
Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Evidence Required:
3. The student graphs the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality).

Tools: None

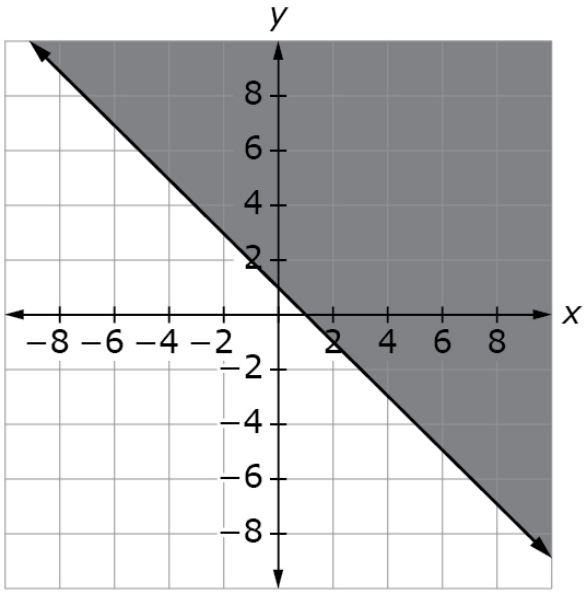
Prompt Features: Given a linear inequality in two variables graphed in the coordinate plane, the student is prompted to enter the corresponding linear inequality.

Stimulus Guidelines:

- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- Item difficulty can be adjusted by:
  - varying the level of algebra necessary to obtain a form of the given inequality that can be graphed
  - using integer, rational, or real variable coefficients or constants

TM3b:
Stimulus: The student is presented with a graph of the solution set of a linear inequality in two variables.

Example Stem: The graph shown represents the set of ordered pairs that are solutions to an inequality.



Enter the inequality that best represents the solution set shown by the line and the shaded region in the plane.

Rubric: (1 point) Student enters the inequality (e.g., $y \geq -x + 1$).

Response Type: Equation/Numeric

Task Model 3

Response Type: Graphing

DOK Level 2

A–REI.D.12
Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Evidence Required:
3. The student graphs the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality).

Tools: None

Accessibility Note:
Graphing items are not currently able to be Brailled. Minimize the number of items developed to this TM.

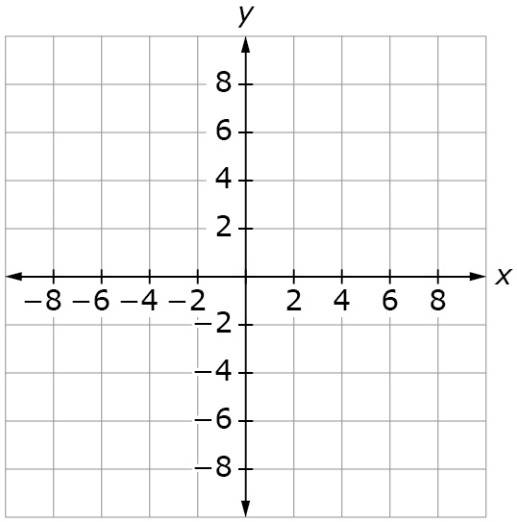
Prompt Features: Given a linear inequality in two variables, the student is prompted to graph it in the coordinate plane and identify a point that is in the solution set of the given linear inequality.

Stimulus Guidelines:
- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- The linear inequality must use ≤ or ≥.
- Item difficulty can be adjusted by:
  - varying the level of algebra necessary to obtain a form of the given inequality that can be graphed
  - using integer, rational, or real variable coefficients or constants

TM3c:
Stimulus: The student is presented with one linear inequality in two variables.

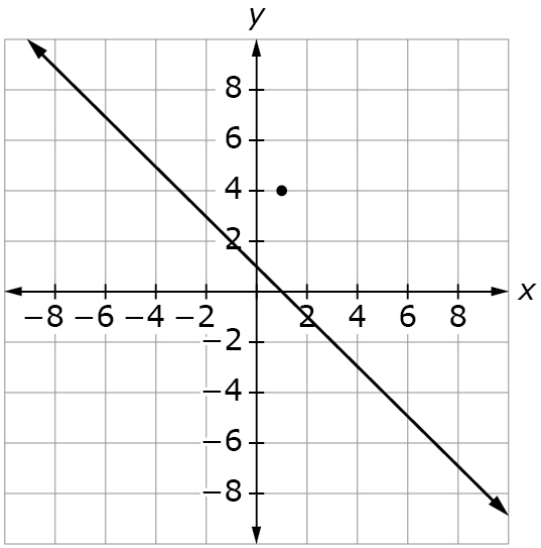
Example Stem:
Part A:
Graph the line representing the boundary of the linear inequality, $x + y \geq 1$.

Part B:
Plot a point representing an ordered pair that is part of the solution set of this inequality that is not on the boundary.



Interaction: The student uses a graphing tool to draw a line representing the boundary of the inequality. Student then plots a point within the region that represents the solution set of the inequality.

Rubric: (1 point) Student graphs the equation and plots a point within the solution set (e.g., see one possible solution below).

	 **Response Type:** Graphing

Task Model 4

Response Type: **Graphing**

DOK Level 2

A–REI.D.12
Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Evidence Required:
4. The student will be able to graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Tools: None

Version 3 Update:
Edited Task Model 4a stem to include "…that is not on either boundary."

Accessibility Note:
Graphing items are not currently able to be Brailled. Minimize the number of items developed to this TM.

Prompt Features: Given a system of linear inequalities in two variables, the student is prompted to graph them on the coordinate plane and plot a point that is in the solution set of the given system.

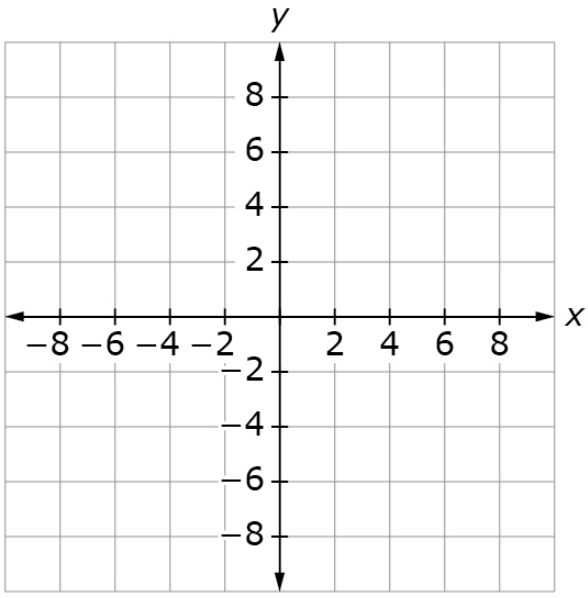
Stimulus Guidelines:
- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- The linear inequality must use ≤ or ≥.
- Item difficulty can be adjusted by:
  - varying the level of algebra necessary to obtain a form of the given inequality that can be graphed
  - using integer, rational, or real variable coefficients

TM4a:
Stimulus: The student is presented with a system of linear inequalities in two variables.

Example Stem:
Part A:
Graph the lines representing the boundaries of the system of linear inequalities.

$3x + 2y \leq 6$
$4x - y \leq 8$

Part B:
Plot a point within the solution set that is not on either boundary line.



Task Model 4

Response Type: Graphing

DOK Level 2

A–REI.D.12
Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Evidence Required:
4. The student will be able to graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

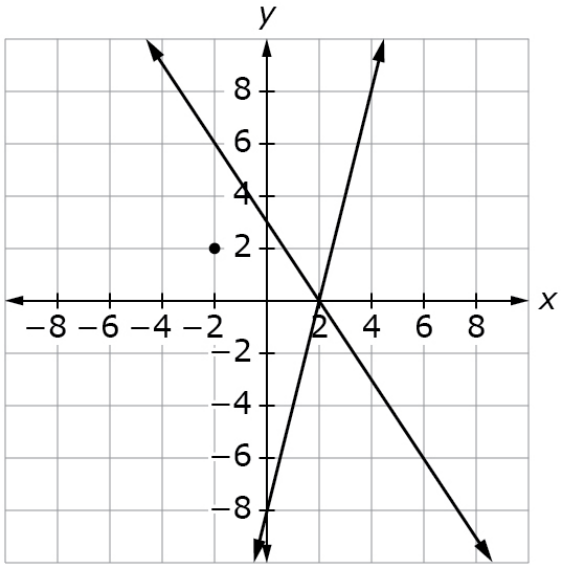
Tools: None

Version 3 Update:
Edited Task Model 4a stem to include "…that is not on either boundary."

Accessibility Note:
Graphing items are not currently able to be Brailled. Minimize the number of items developed to this TM.

Interaction: The student uses a graphing tool to draw a line representing the boundary line for each inequality. Student then plots a point within the solution set of the system of inequalities.

Rubric: (1 point) Student graphs the boundary lines for a system of linear inequalities and plots a point in the region containing the solution set (e.g., see one possible solution below).



Response Type: Graphing

Task Model 4

Response Type:
Hot Spot

DOK Level 1

A–REI.D.12
Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Evidence Required:
4. The student will be able to graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Tools: None

Version 3 Update:
Edited Task Model 4c to show only inequalities that do NOT equal the line (dashed line).

Accessibility Note: Hot spot items are not currently able to be Brailled. Minimize the number of items developed to this TM.

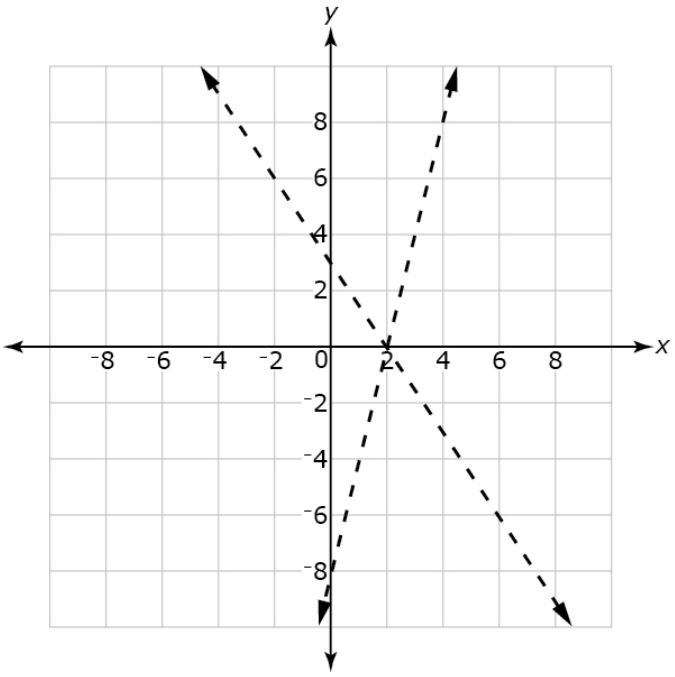
Prompt Features: Given a system of linear inequalities in two variables, the student is prompted to click on the region of the plane that represents the solution set of the given system of linear inequalities.

Stimulus Guidelines:
- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- The linear inequality must use < or >.
- Item difficulty can be adjusted by:
  - varying the level of algebra necessary to obtain a form of the given inequality that can be graphed
  - using integer, rational, or real variable coefficients

TM4b:
Stimulus: The student is presented with a system of linear inequalities in two variables.

Example Stem: Click on the region of the plane that contains the solution set of the system of linear inequalities.

$3x + 2y < 6$
$4x - y < 8$



Interaction: The student clicks on the correct region of the graph that contains the solution set to the system of linear inequalities.

Task Model 4

Response Type:
Hot Spot

DOK Level 1

A–REI.D.12
Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

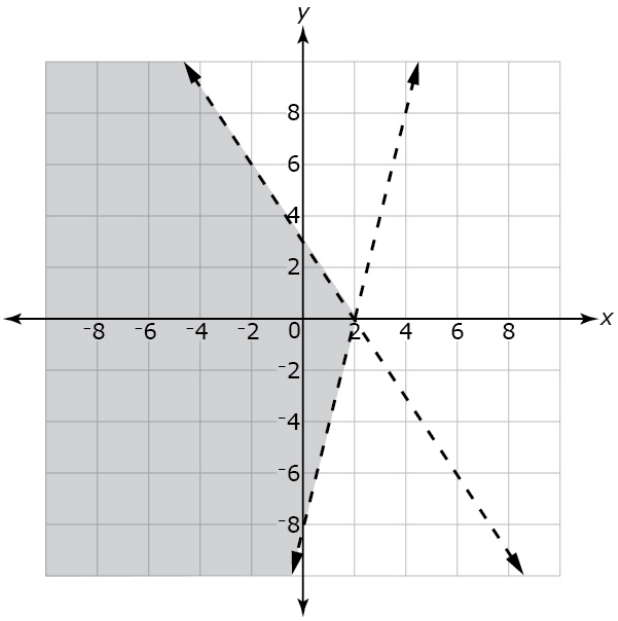
Evidence Required:
4. The student will be able to graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Tools: None

Version 3 Update:
Edited Task Model 4c to show only inequalities that do NOT equal the line (dashed line).

Accessibility Note: Hot spot items are not currently able to be Brailled. Minimize the number of items developed to this TM.

Rubric: (1 point) Student correctly selects the region containing the solution set (e.g., see below).



Response Type: Hot Spot

Task Model 4

Response Type:
Multiple Choice, single correct response

DOK Level 1

A–REI.D.12

Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Evidence Required:
4. The student will be able to graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Tools: None

Prompt Features: Given a system of linear inequalities in two variables, the student is prompted to select the corresponding graph representing the solution set.

Stimulus Guidelines:

- Graphs are on a maximum 20 by 20 grid with scaled and labeled axes.
- The linear inequality may use ≤, ≥, <, and >.
- Item difficulty can be adjusted by:
  - varying the level of algebra necessary to obtain a form of the given inequality that can be graphed
  - using integer, rational, or real variable coefficients

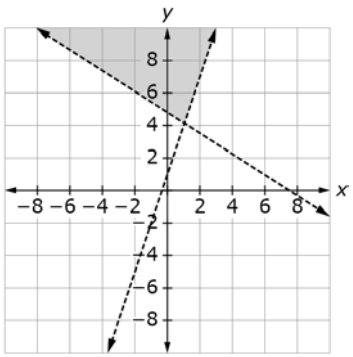
TM4c:
Stimulus: The student is presented with a system of linear inequalities in two variables.

Example Stem: Select the graph that shows the solution set of the system of linear inequalities.

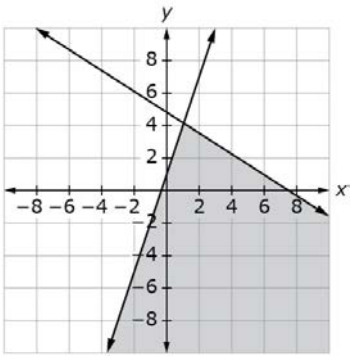
$y > -\frac{2}{3}x + 5$

$y > 3x + 1$

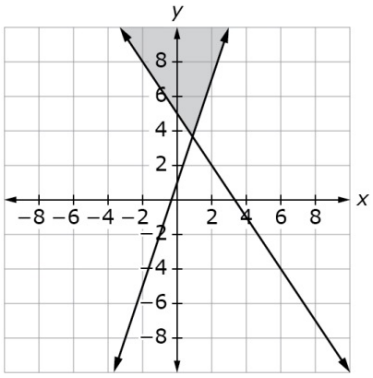
A.



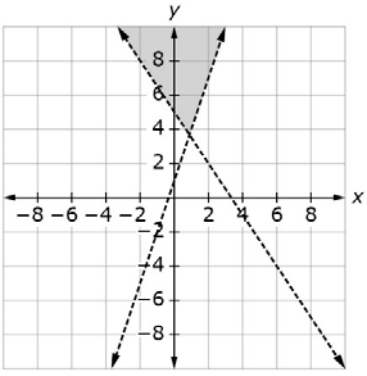
C.



B.



D.



Rubric: (1 point) Student selects the graph given the system of linear inequalities (e.g., A).

Response Type: Multiple Choice, single correct response

Task Model 4

Response Type: Graphing; Hot Spot

DOK Level 2

A–REI.D.12

Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Evidence Required:
4. The student will be able to graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Tools: None

Accessibility Note: Graphing and Hot Spot items are not currently able to be Brailled. Minimize the number of items developed to this TM.

Prompt Features: Given a system of linear inequalities in two variables, the student is prompted to graph the system and select points that are in the solution set of the system.

Stimulus Guidelines: (same as TM4a)

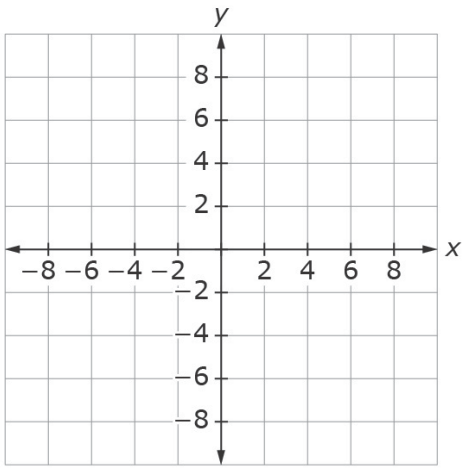
TM4d:
Stimulus: The student is presented with a system of linear inequalities in two variables.

Example Stem:
Part A:
Graph the lines representing the boundaries of the system of linear inequalities.

$3x + 2y \leq 6$
$4x - y \leq 8$

Part B:
Determine if each ordered pair is a part of the solution set of the system of linear inequalities. Select the ordered pair(s) that are in the solution set.

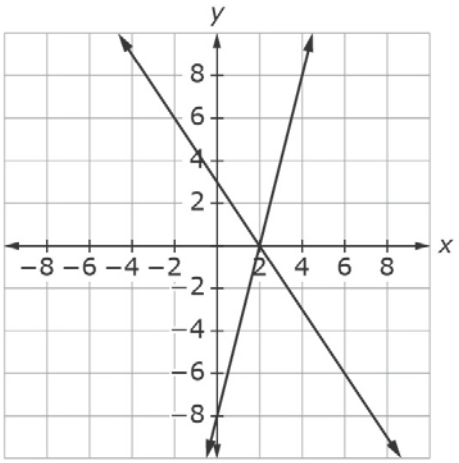
Part A



Part B
(−4, 4) (−4, 0) (0, 4) (0, −4) (4, 0)

Interaction: The student uses a graphing tool to draw a line representing the boundary line of each inequality. Student then selects if each ordered pair is within the solution set.

Rubric: (2 points) The student graphs the boundary lines for a system of linear inequalities correctly and selects the ordered pairs in the solution set (e.g., see below).
(1 point) The student graphs the boundary lines for a system of linear inequalities correctly or selects the ordered pairs in the solution set.

	Part A  ***Part B*** [(−4, 4)] [(−4, 0)] (0, 4) [(0, −4)] (4, 0) **Response Type:** Graphing; Hot Spot