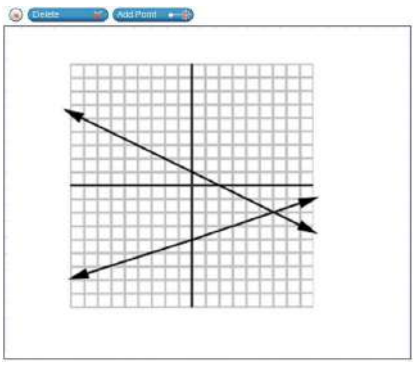
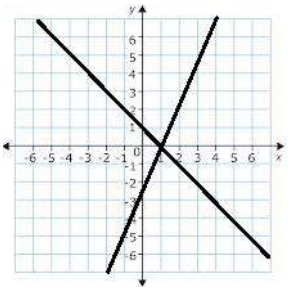
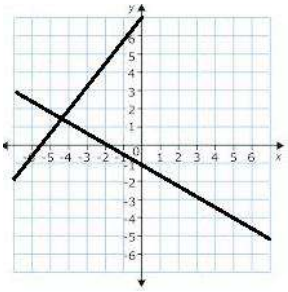
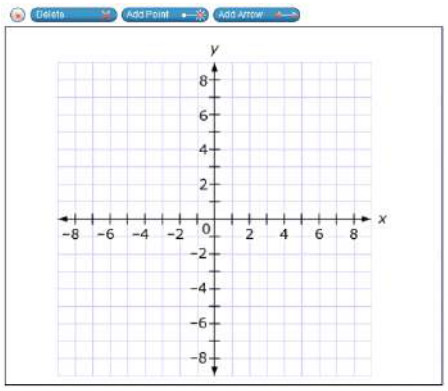
Content Standard	***MAFS.8.EE*** *Expressions and Equations* ***MAFS.8.EE.3*** *Analyze and solve linear equations and pairs of simultaneous linear equations.* ***MAFS.8.EE.3.8*** Analyze and solve pairs of simultaneous linear equations. ***MAFS.8.EE.3.8a*** Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. ***MAFS.8.EE.3.8b*** Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.* ***MAFS.8.EE.3.8c*** Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*
Assessment Limits	Numbers in items must be rational numbers. Coefficients of equations in standard form must be integers. Items written for *MAFS.8.EE.3.8a* will include the graph. Equations used in items must be provided.
Calculator	Yes
Item Types	Equation Editor GRID Matching Item Multiple Choice Open Response
Context	Allowable

Sample Item	Item Type
A graph of a system of two equations is shown. Use the Add Point tool to plot the solution of the system. 	GRID

Sample Item	Item Type
How many solutions does the system of two equations shown have? $y = 3(x + 4)$ $y = 3(x - 4)$	Open Response
A graph of a system of two equations is shown.  What is the solution of the system? $x =$ ☐ $y =$ ☐	Equation Editor
A graph of a system of two equations is shown.  What is the approximate solution of the system? (☐ , ☐)	Equation Editor
What is the solution to the system of two equations shown? $5x + 4y = 12$ $3x + 6y = 8$ (☐ , ☐)	Equation Editor

Sample Item	Item Type
A system of two equations is shown. $y = 5x + 3$ $y = 4x - 5$ A. Use the Add Arrow tool to graph the two lines. B. Drag the palette image to show the solution of the system. X 	GRID
Radha is trying to choose between two bike rental companies, Company A and Company B. Company A charges a $\$25$ initial fee and an additional $\$5$ for each hour rented. Company B charges an initial $\$18$ fee and an additional $\$6$ for each hour rented. The total cost to rent a bike from Company A can be represented by the equation $y = 5x + 25$. The total cost to rent a bike from Company B can be represented by the equation $y = 6x + 18$. For how many hours of rental is the amount charged by the two companies the same? What is the cost, in dollars, of renting the bike for this many hours? Hours = ☐ Cost = ☐	Equation Editor
Enter values for a and b, so that the system of equations shown has one solution. $y = 3x + 4$ $y = ax + b$ $a =$ ☐ $b =$ ☐	Equation Editor

<table>
<tr><th>Sample Item</th><th>Item Type</th></tr>
<tr><td>Select the number of solutions for each system of two linear equations.

<table>
<tr><th></th><th>Zero solutions</th><th>One solution</th><th>Infinitely many solutions</th></tr>
<tr><td>$2x + 2y = 3$
$4x + 4y = 6$</td><td>☐</td><td>☐</td><td>☐</td></tr>
<tr><td>$7x + 5y = 8$
$7x + 7y = 8$</td><td>☐</td><td>☐</td><td>☐</td></tr>
<tr><td>$-2x + 3y = 7$
$2x - 3y = -7$</td><td>☐</td><td>☐</td><td>☐</td></tr>
</table></td><td>Matching Item</td></tr>
</table>