Module 7 Lesson 5
Share 1 – 2 Possible Solutions

1.

$3x+5y=10$ $6x+10y=20$ **System A** Slopes and intercepts are the same.	$x+4y=6$ $2x+8y=3$ **System B** Slopes are the same and intercepts are different.	$4x-2y=9$ $4x-2y=-9$ **System B** Slopes are the same and intercepts are different.
$2x-3y=6$ $2x+3y=6$ **System C** Slopes are different.	$9x-6y=27$ $3x-2y=9$ **System A** Slopes and intercepts are the same.	$4x+5y=10$ $8x+15y=30$ **System C** Slopes are different.
$6x+4y=30$ $3x+2y=30$ **System B** Slopes are the same and intercepts are different.	$x-3y=4$ $10x-3y=4$ **System C** Slopes are different.	$2x-3y=9$ $3x-4.5y=13.5$ **System A** Slopes and intercepts are the same.

2. If the terms of one equation can be multiplied by a single constant to obtain the terms of the second equation, the equations represent coincident lines and there will be infinitely many solutions.

If the terms on the left side of one equation can be multiplied by a single constant to obtain the terms on the left side of the second equation but the term on the right side of the first equation cannot be multiplied by the same constant to obtain the term on the right side of the second equation, the equations represent parallel lines and there will be no solution.

If the terms on the left side of one equation cannot be multiplied by a single constant to obtain the terms on the left side of the second equation, the equations represent intersecting lines and there will only be one solution.