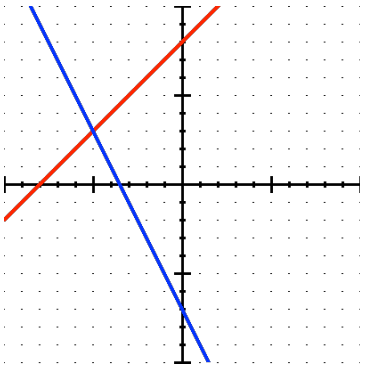
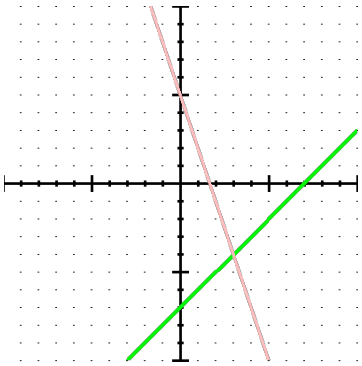
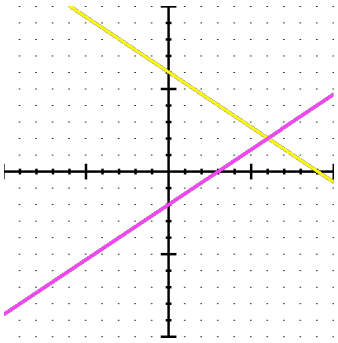
Mr. Fahrenbacher
Algebra 12-22
Solving Systems Review

	Easy	Medium	Challenging
Solve Graphically	$y = x + 8$ $y = -2x - 7$	$x - y = 7$ $y = -3x + 5$	$2x + 3y = 18$ $4x - 6y = 12$
Solve by Substitution	$y = 4x + 2$ $x + 3y = 32$	$x - 2y = -16$ $4x + 6y = 6$	$3x - y = 18$ $-9x + 5y = -54$
Solve by Elimination	$8x - 7y = 42$ $-6x + 7y = -28$	$6x + 7y = 9$ $4x + 3y = 1$	$2x - 2y = 2$ $5y = 3x - 13$
Types of Solutions (Infinite / No Solution)	$4x + 3y = 10$ $4x + 3y = 3$	$y = 3x - 2$ $-18x + 6y = -12$	$\frac{1}{2}x + \frac{1}{3}y = \frac{7}{6}$ $3x + 2y = -9$
Constraints / Word Problems	A business rents in-line skates and bicycles. During one day, the business has a total of 23 rentals and collects $235 for the rentals. If in-line skates are rented for $5 per day and bicycles are rented for $35 per day, find the number of pairs of skates rented and the number of bicycles rented.	A company offers two plans for high-speed Internet service. With plan A, you pay $220 for the modem and $40 per month for service. With plan B, the modem is free and you pay $50 per month for service. After how many months are the total costs of the plans the same?	Laura has $5.15 in dimes and quarters. She has 6 more dimes than quarters. How many quarters does she have?

Answers

	Easy	Medium	Challenging
Solve Graphically	 (-5, 3)	 (3, -4)	 (6, 2)
Solve by Substitution	(2, 10)	(-6, 5)	(6, 0)
Solve by Elimination	(7, 2)	(-2, 3)	(-4, -5)
Types of Solutions (Infinite / No Solution)	No Solutions	Infinitely Many Solutions	No Solutions (Multiply the first equation by 6)
Constraints / Word Problems	skates = x bicycles = y x + y = 23 5x + 35y = 235 Solution: (19, 4) skates = 19 bicycles = 4	months = x payment = y y = 40x + 220 y = 50x Solution (22, 1100) Months: 22	dimes = x quarters = y x - y = 6 0.10x + 0.25y = 5.15 Solution: (19, 13) Quarters: 13