

Chapter 5 Extra Credit

All work is to be done on separate pieces of paper!

Section One: (3 points)

Solve each equation for the specified variable.

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|--------------------------|--------------------------|-------------------------|
| 1. y in $5x + 3y = 15$ | 2. x in $5x + 3y = 15$ | 3. w in $2l + 2w = P$ |
| 4. m in $4n = 3m - 1$ | 5. a in $2a + b = c$ | 6. a in $b - 2a = c$ |

Section Two: (2 points)

Find the point of intersection (x, y) for each system of linear equations.

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|--------------------------------|--------------------------------|----------------------------------|----------------------------------|
| 1. $y = x - 6$
$y = 12 - x$ | 2. $y = 3x - 5$
$y = x + 3$ | 3. $y = 2x + 16$
$y = 5x + 4$ | 4. $y = 3x - 5$
$y = 2x + 14$ |
|--------------------------------|--------------------------------|----------------------------------|----------------------------------|

Section Three: (4 points)

For each word problem, write 2 equations, then solve to find a value for each variable.

Jacques will wash the windows of a house for \$15.00 plus \$1.00 per window. Ray will wash them for \$5.00 plus \$2.00 per window. Let x be the number of windows and y be the total charge for washing them. Write an equation that represents how much each person charges to wash windows. Solve the system of equations and explain what the solution means and when it would be most economical to use each window washer.

Larry and his sister, Betty, are saving money to buy their own laptop computers. Larry has \$215 and can save \$35 each week. Betty has \$380 and can save \$20 each week. When will Larry and Betty have the same amount of money?