

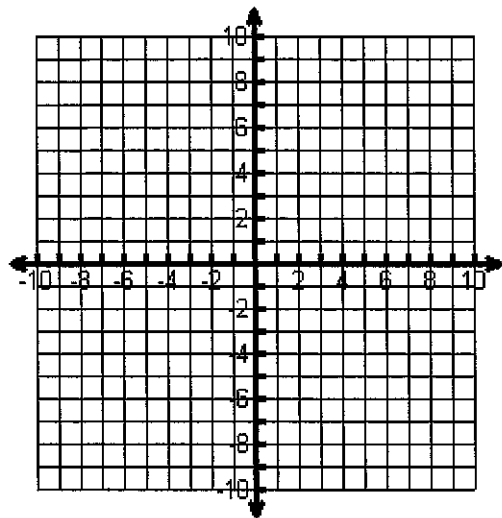
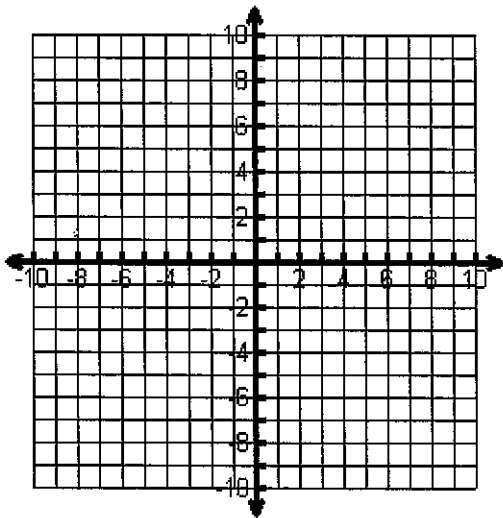
Name: \_\_\_\_\_

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**Graphing Systems of Inequalities Homework**

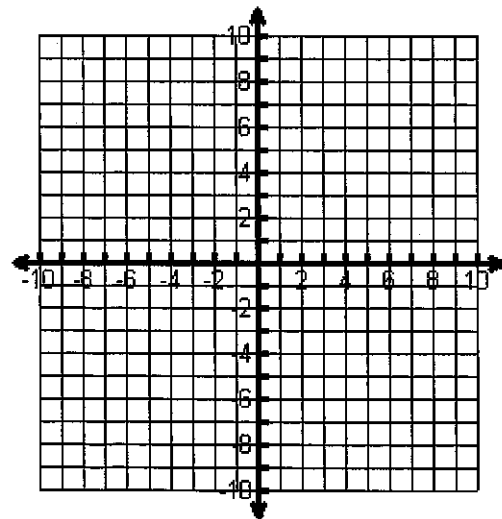
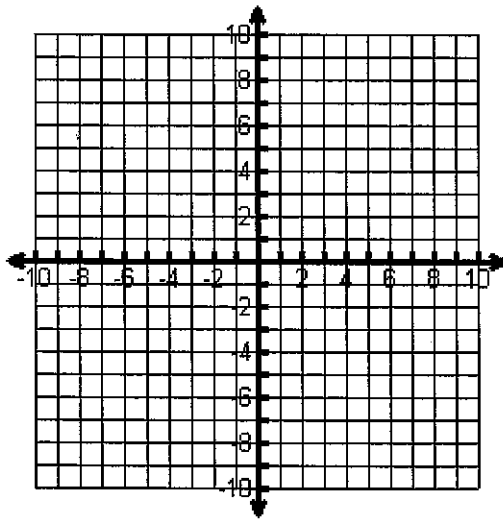
$$y < 2x - 1$$

$$y > -x + 2$$



$$y < 2x - 1$$

$$y > -x + 2$$





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**Jennifer's Jobs**

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Jennifer is a college student who works two jobs after school and on weekends trying to make some extra spending money and to help pay for her tuition. At Job A, she gets \$8 an hour, and at job B, she gets \$10 an hour.

1. If Jennifer only works at Job A, write an equation for her total income  $I$  for working  $a$  hours.
  - a. How much will she make if she works 20 hours in the week? Justify your answer.
  - b. If she wants to make \$200 dollars per week, how many hours would she have to work? Justify your answer.
  
2. If Jennifer only works at Job B, write an equation for her total income  $I$  for working  $b$  hours.
  - a. How much will she make if she works 20 hours in the week? Justify your answer.
  - b. If she wants to make \$300 dollars per week, how many hours would she have to work? Justify your answer.
  
3. If Jennifer works at both Job A and Job B during the week, write an equation for her total income for working  $a$  hours at Job A and  $b$  hours at Job B.
  - a. How much will she make if she works 15 hours a week at Job A and 5 at Job B? Justify your answer.
  - b. How much will she make if she works 10 hours at each job during the week. Justify your answer.
  - c. If Jennifer wants to make \$200 combined for working her two jobs, find 3 possible combinations of  $a$  hours at Job A and  $b$  hours at Job B that will give her exactly \$200. Justify your answer.

**Homework:****Tom the Tennis Instructor**

Tom is a tennis instructor. He gives individual lessons for \$35 an hour and does team lessons for \$50 per hourly session. He has trouble getting teams to sign up when league play is not going on, so sometimes he has to count on individual lessons for his income.

1. If Tom only does individual lessons, write an equation for his total income  $T$  working  $i$  hours.
  - a. How much will he make if he works 30 hours a week? Justify your answer.
  - b. If he wants to make \$1,500 dollars per week, how many hours does he have to work? Justify your answer.
2. If Tom only gives team lessons, and he wants to make \$1,500 dollars per week, how many hours does he have to work? Justify your answer.
  - a. How much will he make if he works 30 hours a week with this plan? Justify your answer.
3. If League play is going on, Tom can get both individual lessons and team lessons. Write an equation for his total income  $T$  for working  $i$  individual hours and  $t$  team hours.
  - a. How much will he make if he works 30 hours of individual lessons and 10 hours of team lessons. Justify your answer.
  - b. If Tom works 30 hours of individual lessons, how many hours of team lessons would he need to make \$2,000 in a week?
  - c. If Tom wants to make \$1500 combined for teaching different types of lessons, find 3 possible combinations of team lessons and individual lessons that will give him exactly \$1500. Justify your answer.