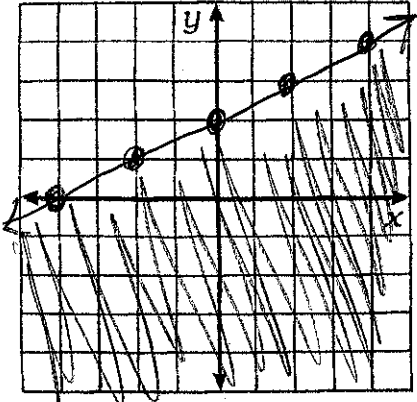


What Did the Boy Tree Say to the Girl Tree?

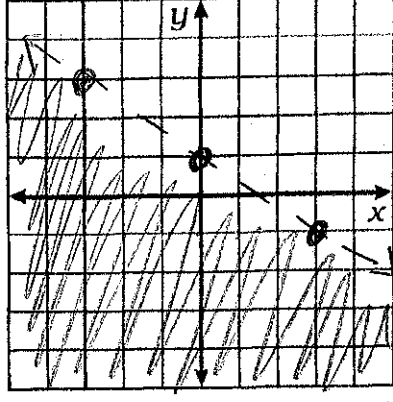
Graph each inequality. Circle the number-letter pair for each statement that correctly describes the location of solutions. Write the letter in the box at the bottom of the page with that number.

1. $-x + 2y \leq 4$ $y \leq \frac{1}{2}x + 2$



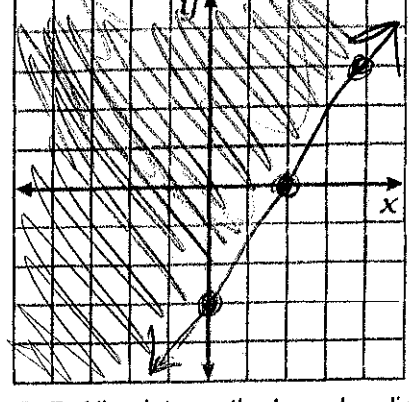
- 10•R All points on the boundary line.
- 4•I All points below the line.

2. $2x + 3y < 3$ $y < -\frac{2}{3}x + 1$



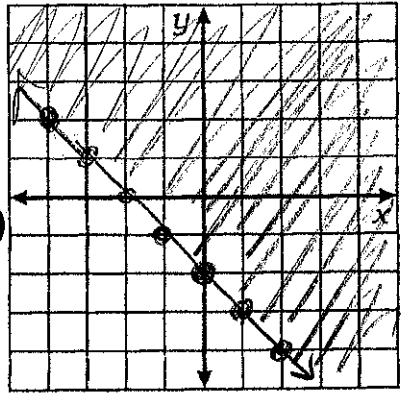
- 1•A All points on the boundary line.
- 13•E All points below the line.

3. $3x - 2y \leq 6$ $y \geq \frac{3}{2}x - 3$



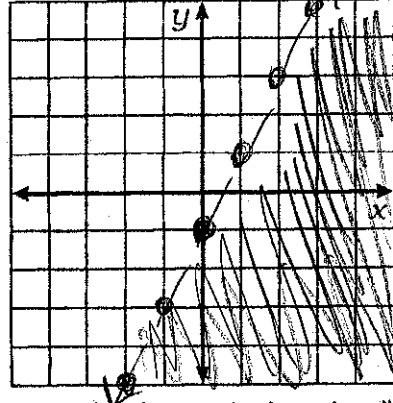
- 1•I All points on the boundary line.
- 9•D All points below the line.

4. $x + y + 2 \geq 0$ $y \geq -x - 2$



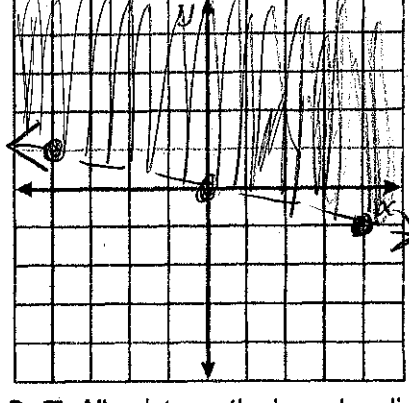
- 6•E All points on the boundary line.
- 14•N All points below the line.

5. $2x - y > 1$ $y < 2x - 1$



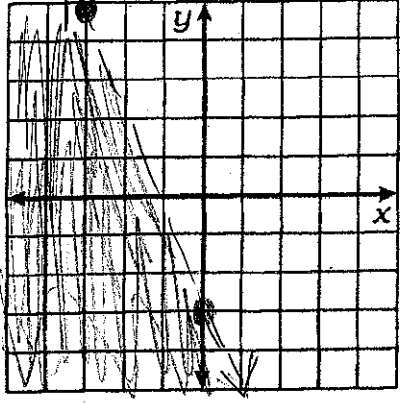
- 3•S All points on the boundary line.
- 9•I All points below the line.

6. $x + 4y > 0$ $y > -\frac{1}{4}x$



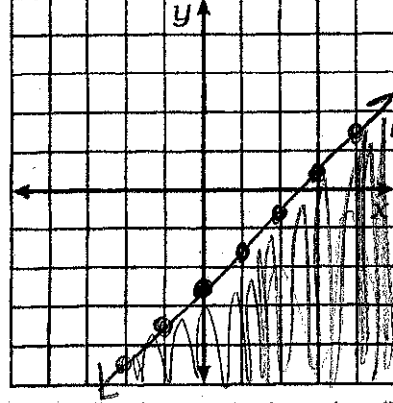
- 8•T All points on the boundary line.
- 5•R All points below the line.

7. $8x + 3y < x - 9$ $y < -\frac{8}{3}x - 3$



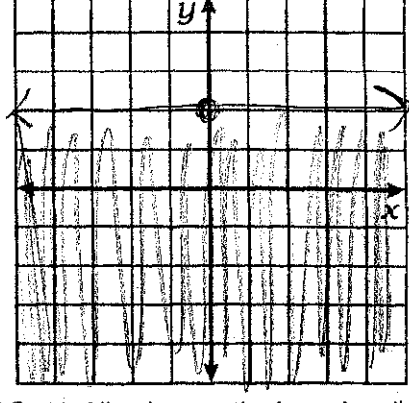
- 12•S All points on the boundary line.
- 14•W All points below the line.

8. $2(x - y) \geq 5$ $2x - 2y \geq 5$ $y \leq x - \frac{5}{2}$



- 3•P All points on the boundary line.
- 8•F All points below the line.

9. $y - 2 \leq 0$ $y \leq 2$



- 12•Y All points on the boundary line.
- 5•N All points below the line.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
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What Do You Call a Pony That Doesn't Whinny?

Write and graph an inequality that models the situation. Then answer the questions. Cross out the letters above each answer. Write the remaining letters in the spaces at the bottom.

Situation #1. Party Nuts.

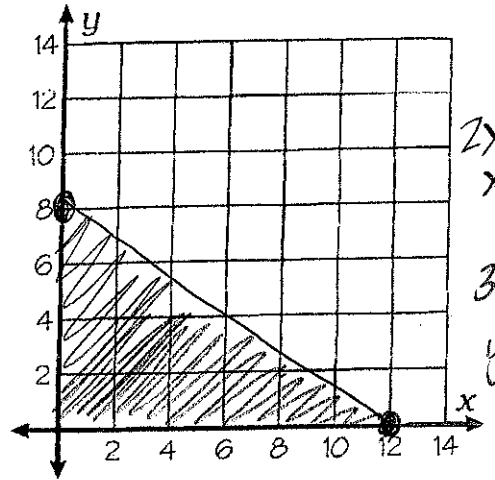
Zark is buying peanuts and cashews for a party. He can spend no more than \$24. Peanuts cost \$2 per pound and cashews cost \$3 per pound.

Let x = number of pounds of peanuts

Let y = number of pounds of cashews

inequality: $2x + 3y \leq 24$

- Which of the following is a solution of the inequality?
a. (2,8) b. (4,6) c. (8,2)
- What is the greatest number of pounds of peanuts that Zark can buy? 12 lbs.
- If $x = 6$ lb, what are all possible values of y ?
 $y \leq 4$



Situation #2. Rub-a-dub-dub.

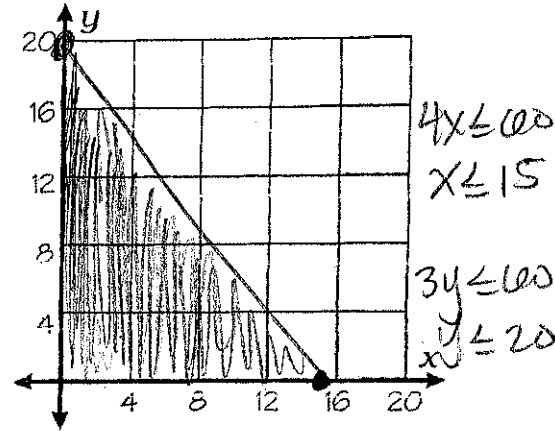
Kara is filling her bathtub. The cold water flows at a rate of 4 gal/min. The hot water flows at a rate of 3 gal/min. Kara wants no more than 60 gal of water in the tub.

Let x = time that cold water is turned on

Let y = time that hot water is turned on

inequality: $4x + 3y \leq 60$

- Which of the following is a solution of the inequality?
a. (5,6) b. (10,4) c. (12,5)
- How many minutes will it take to get 60 gal of water if only cold water is turned on? 15 min
- If $x = 3$ min, what are all possible values of y ?
 $y \leq 16$



Situation #3. Do You Wanna Dance?

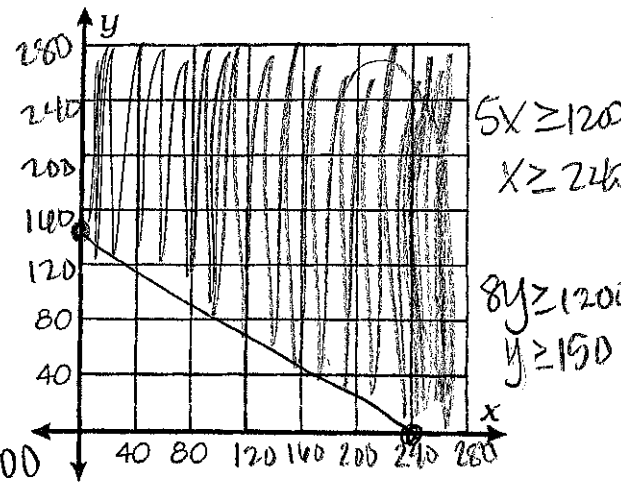
Student Council is selling tickets to the Valentine Dance. Tickets cost \$5 per person or \$8 per couple. To cover expenses, at least \$1200 worth of tickets must be sold.

Let x = number of \$5 tickets sold

Let y = number of \$8 tickets sold

inequality: $5x + 8y \geq 1200$

- Which of the following is a solution of the inequality?
a. (160,40) b. (40,160) c. (80,80)
- How many \$8 tickets must be sold if no \$5 tickets are sold? 150 tickets
- If $x = 80$ tickets, what are all possible values of y ?
 $y \geq 100$



AP	AL	OT	B	IT	OO	T	HE	L
$0 \leq y \leq 16$	(80,80)	12	150	$y \geq 120$	(8,2)	(5,16)	15	$0 \leq y \leq 6$
EH	R	O	AR	TS	ON	S	E	AT
$0 \leq y \leq 12$	$y \geq 100$	(12,5)	14	(40,160)	(10,4)	180	(4,6)	$0 \leq y \leq 4$