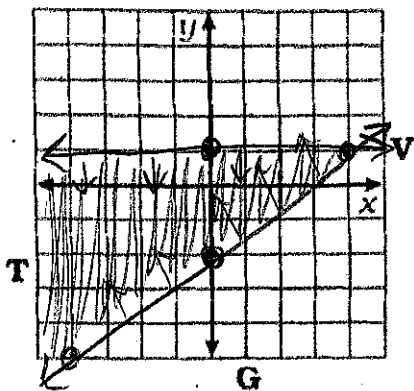


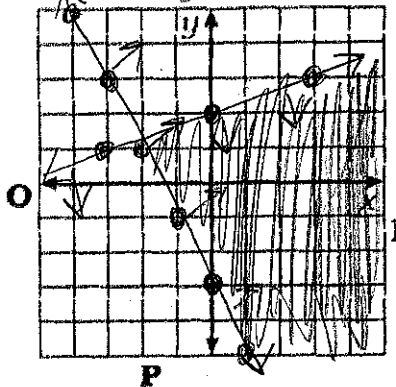
# Which Member of Fred Ferd's Family Thinks He's a Pen?

Show the solution region for each system with crosshatching or shading. The crosshatching or shading, if extended, would cover a letter. Write this letter in each box with the exercise number.

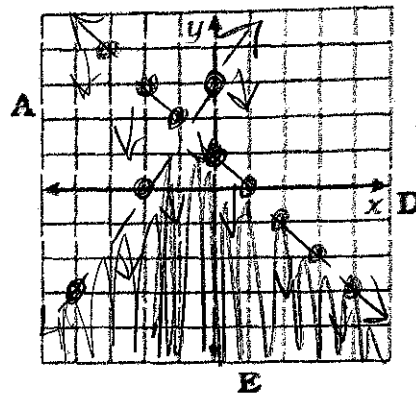
1.  $y \geq \frac{3}{4}x - 2$   
 $y \leq 1$



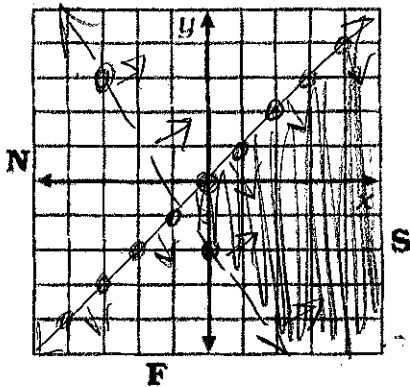
2.  $y \geq -2x - 3$   
 $y \leq \frac{1}{3}x + 2$



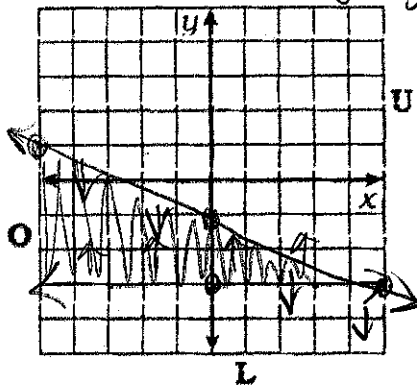
3.  $y < \frac{3}{2}x + 3$   
 $y < -x + 1$



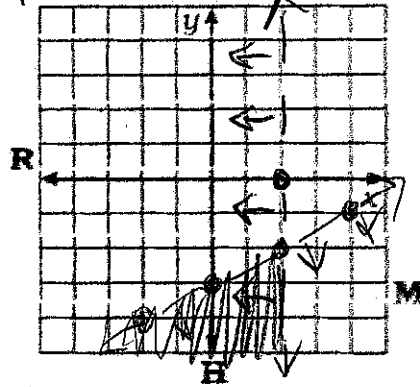
4.  $y \leq x$   
 $5x + 3y > -6$



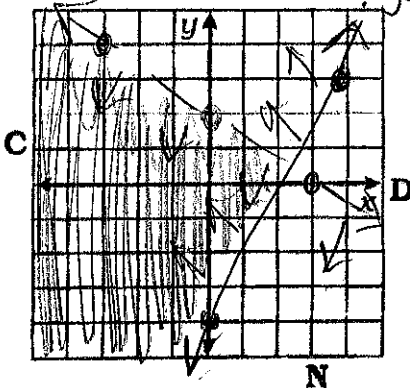
5.  $y + 3 > 0$   
 $-2x - 5y \geq 5$



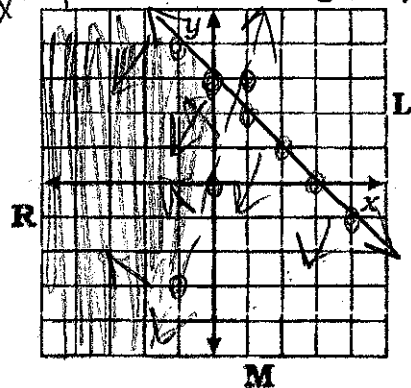
6.  $x < 2$   
 $x - 2y > 6$



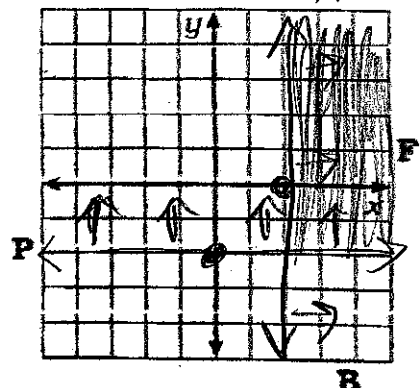
7.  $8x + 12y < 24$   
 $35x - 20y \leq 80$



8.  $10x + 10y \leq 30$   
 $y - 3x > 0$



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



6	2	4	9	2	7	9	8	5	1	6	3	8
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# What Do You Call a New Movie That Is Just Like an Old Movie?

Write and graph a system of inequalities that models the situation. Circle the number-letter pair for each correct pair that is a solution. Write the letter in the matching numbered box at the bottom.

## Situation 1. SOMETHING FISHY.

The owner of Fred's Fish Market orders cod and salmon. He wants to buy at least 50 pounds of fish but cannot spend more than \$300. Cod is \$4 per pound and salmon is \$7 per pound.

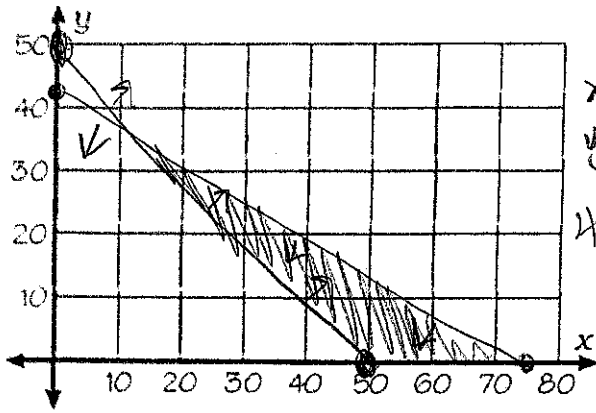
Let  $x$  = number of pounds of cod  
 Let  $y$  = number of pounds of salmon

inequality #1:  $x + y \geq 50$

inequality #2:  $4x + 7y \leq 300$

Which of the following are solutions?

- S-E** (40, 15)    **11-P** (50, 18)    **4-S** (30, 20)



$x \geq 50$   
 $y \geq 50$   
 $4x \leq 300$   
 $x \leq 75$   
 $7y \leq 300$   
 $y \leq 42.9$

- 10-U** (55, 8)    **7-R** (20, 35)

## Situation 2. FLOWER POWER.

Mr. Bloom is designing a rectangular flower garden with a fence around it. He can use no more than 80 ft of fencing. He wants the width to be at least 5 ft and the length to be at least 20 ft.

Let  $x$  = width of the garden (ft)  
 Let  $y$  = length of the garden (ft)

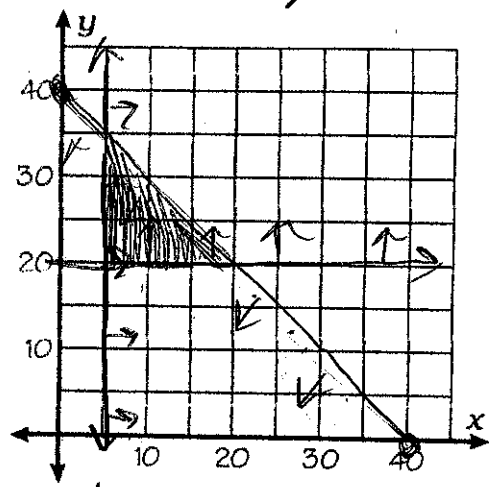
inequality #1:  $2x + 2y \leq 80$

inequality #2:  $x \geq 5$

inequality #3:  $y \geq 20$

Which of the following are solutions?

- 7-S** (10, 23)    **11-E** (7, 30)    **9-T** (18, 25)



- 3-A** (8, 35)    **2-I** (20, 20)

## Situation 3. SPRING FLING.

Tickets for the Spring Dance cost \$3 per person or \$5 per couple. To cover expenses, at least \$750 worth of tickets must be sold. However, no more than 400 people can fit in the gym where the dance is being held.

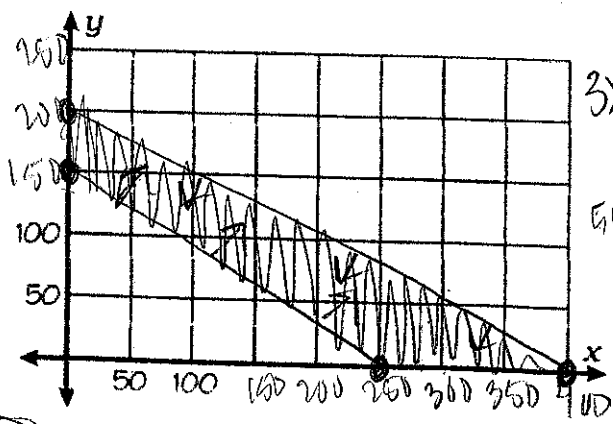
Let  $x$  = number of \$3 tickets sold  
 Let  $y$  = number of \$5 tickets sold

inequality #1:  $3x + 5y \geq 750$

inequality #2:  $x + 2y \leq 400$

Which of the following are solutions?

- 5-H** (50, 110)    **12-L** (150, 70)    **9-G** (280, 45)    **6-U** (300, 60)    **3-T** (0, 200)



$3x \geq 750$   
 $x \geq 250$   
 $5y \geq 750$   
 $y \geq 150$

1 2 3 4 5 6 7 8 9 10 11 12 13