

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 ordered 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.

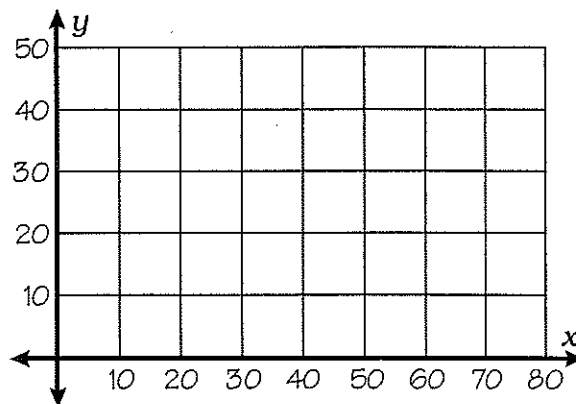
Let x = number of pounds of cod
 Let y = number of pounds of salmon

inequality #1: _____

inequality #2: _____

Which of the following are solutions?

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

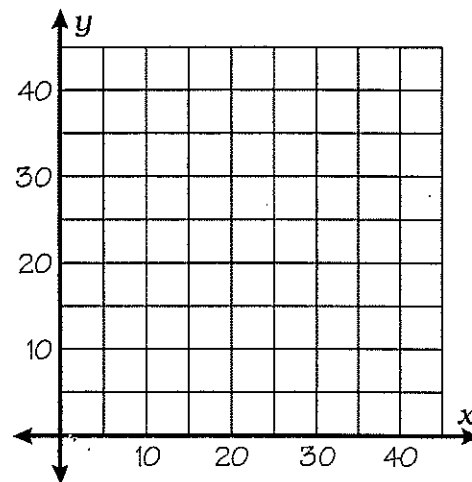
inequality #1: _____

inequality #2: _____

inequality #3: _____

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.

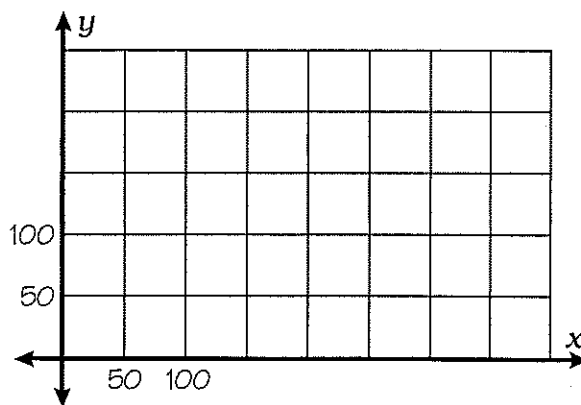
Let x = number of \$3 tickets sold
 Let y = number of \$5 tickets sold

inequality #1: _____

inequality #2: _____

Which of the following are solutions?

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



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

Jack and Jill Jolt own a small bakery that makes fresh cookies daily. They bake two kinds of cookies--plain cookies and cookies with icing. The cookies are sold by the box, and Jack and Jill are confident they can sell all the cookies they make. But there are *three constraints* that limit their production today:

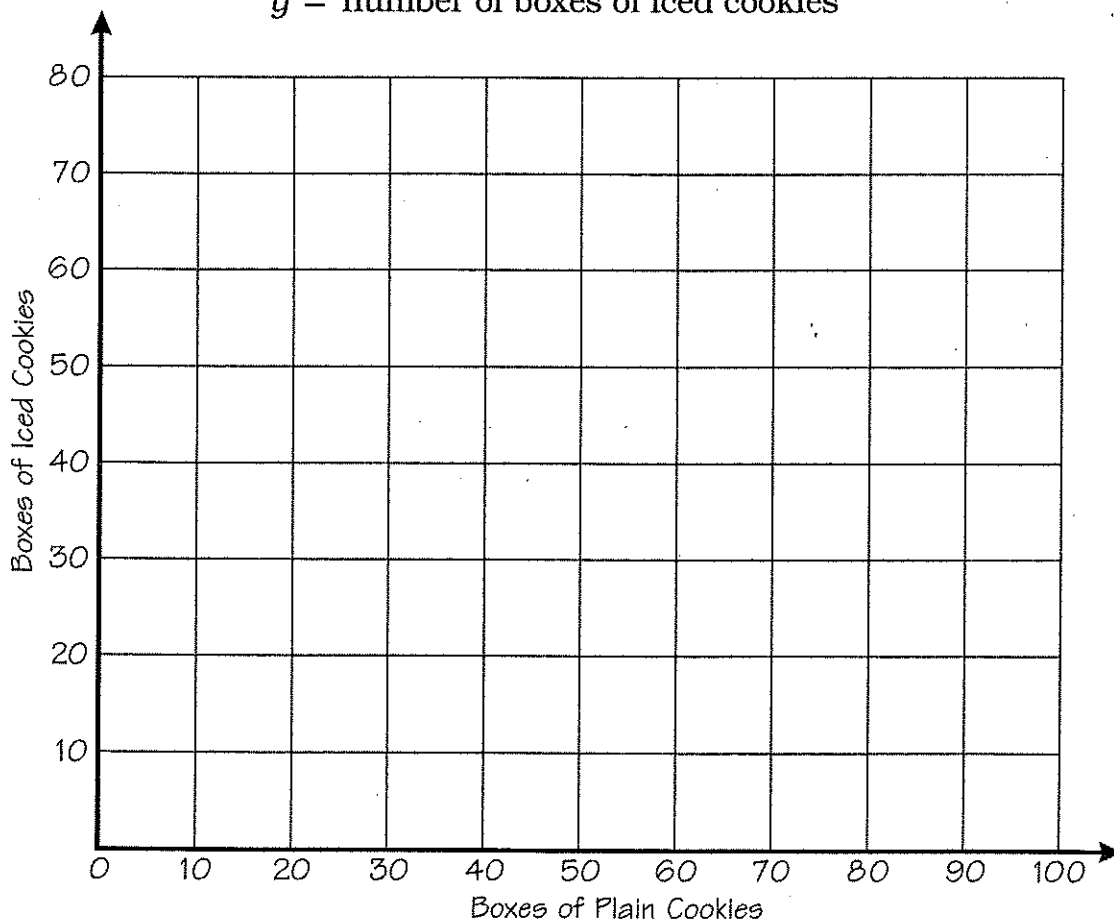
DOUGH: One box of plain cookies requires 1.2 pounds of cookie dough.
One box of iced cookies requires 0.9 pound of cookie dough.
Jack and Jill have 72 pounds of cookie dough.

ICING: Plain cookies require no icing.
One box of iced cookies requires 0.4 pound of icing.
Jack and Jill have 20 pounds of icing.

TIME: One box of plain cookies requires about 0.10 hour to prepare.
One box of iced cookies requires about 0.15 hour to prepare.
Jack and Jill together have 9 hours for preparation.

Write three inequalities. Then find the intersection of these inequalities to show all combinations of cookies that Jack and Jill can make with the constraints given.

Let x = number of boxes of plain cookies
Let y = number of boxes of iced cookies



EXTRA

Suppose the profit on each box of plain cookies is \$3.00, and the profit on each box of iced cookies is \$4.00. How many boxes of each kind of cookie should Jack and Jill make to maximize profit?