← Math 2301, Spring 2021

6.1 Homework-Graphing Linear Inequalities (Homework)

INSTRUCTOR
Francisco Avila A.
University of Texas at El Paso

Print Assignment

Current Score

QUESTION	1	2	3	4	5	6	7	8	9	10
POINTS	0.66/1	0.5/1	1/1	–/1	0.66/1	–/1	–/1	–/1	–/1	–/1

TOTAL SCORE

2.82/10 28.2%

Due Date

SUN, JAN 24, 2021
11:59 PM MST

Request Extension

Assignment Submission & Scoring

Assignment Submission

For this assignment, you submit answers by question parts. The number of submissions remaining for each question part only changes if you submit or change the answer.

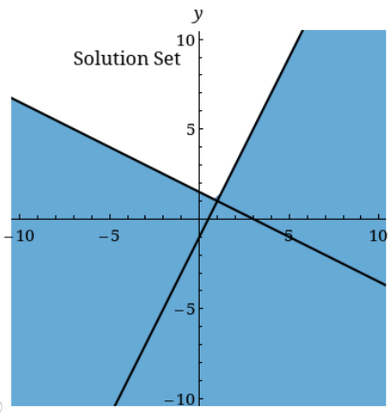
Assignment Scoring

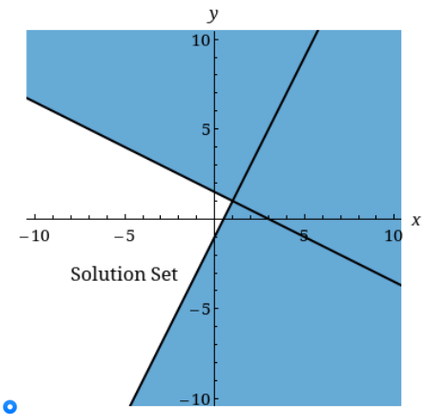
Your last submission is used for your score.

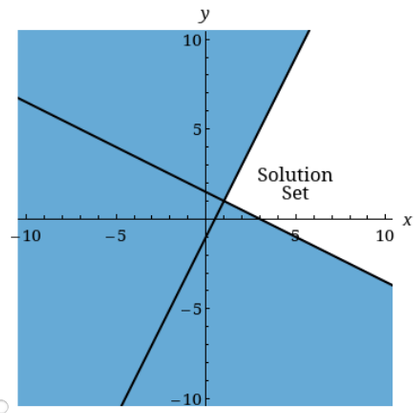
1. [0.66/1 Points] DETAILS PREVIOUS ANSWERS WANEFMAC7 6.1.013. MY NOTES ASK YOUR TEACHER PRACTICE ANOTHER

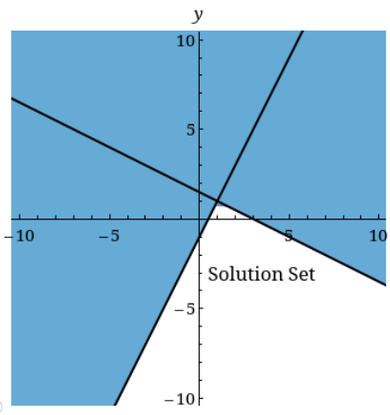
Sketch the region that corresponds to the given inequalities.

$$2x - y \le 1$$
$$x + 2y \le 3$$









Say whether the region is bounded or unbounded.

- The region is bounded.
- The region is unbounded.

Find the coordinates of all corner points (if any). (If an answer does not exist, enter DNE.)

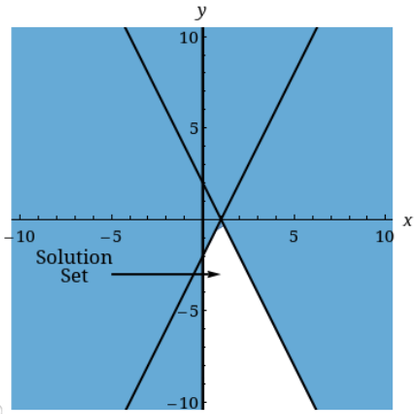
$(x, y) = ($ (1,1) $)$

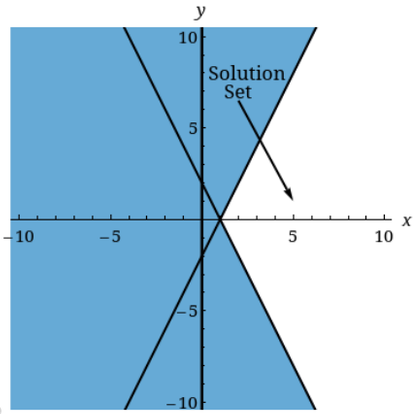
Need Help? Read It

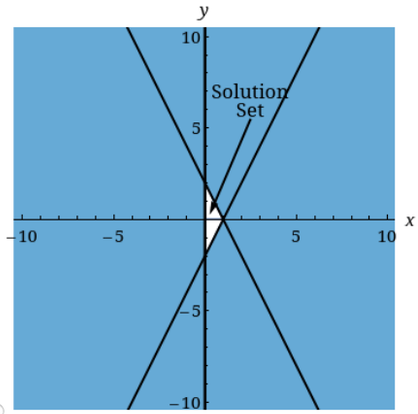
2. [0.5/1 Points] DETAILS PREVIOUS ANSWERS WANEFMAC7 6.1.015. MY NOTES ASK YOUR TEACHER PRACTICE ANOTHER

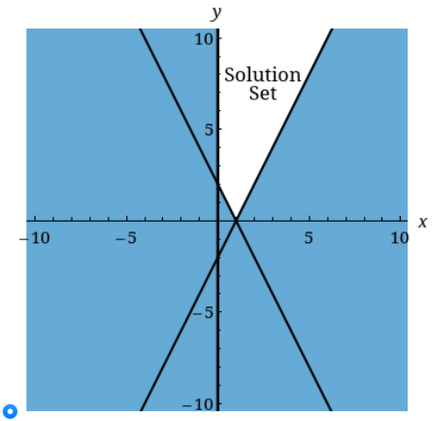
Sketch the region that corresponds to the given inequalities.

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









Say whether the region is bounded or unbounded.

- The region is bounded.
- The region is unbounded.

Find the coordinates of all corner points (if any). (If an answer does not exist, enter DNE.)

smaller x-value $(x, y) = ($ 1,0 $)$

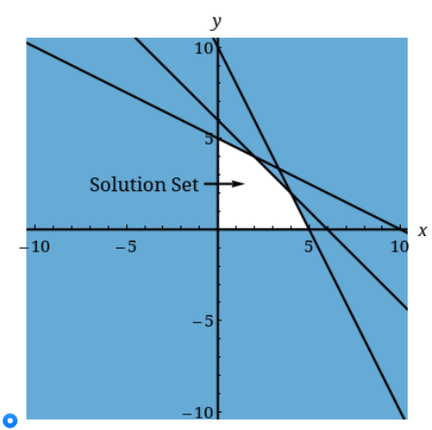
larger x-value $(x, y) = ($ 1 $)$

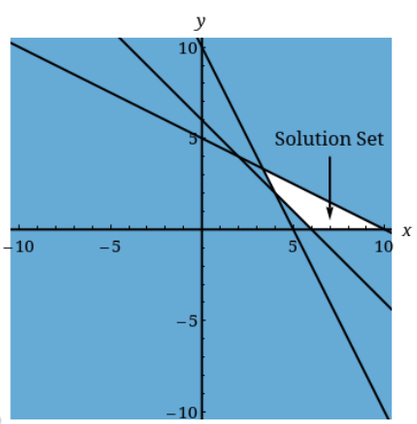
Need Help? Read It Watch It

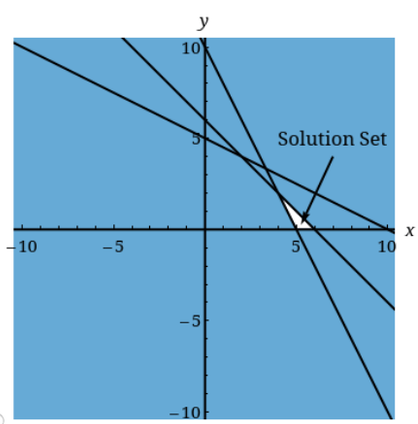
3. [1/1 Points] DETAILS PREVIOUS ANSWERS WANEFMAC7 6.1.019. MY NOTES ASK YOUR TEACHER PRACTICE ANOTHER

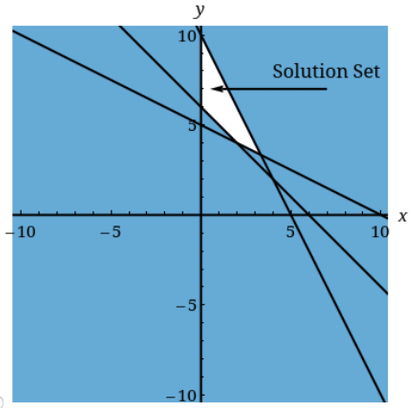
Sketch the region that corresponds to the given inequalities.

$$10x + 5y \leq 50$$
$$5x + 10y \leq 50$$
$$5x + 5y \leq 30$$
$$x \geq 0,\ y \geq 0$$









Say whether the region is bounded or unbounded.

- (●) The region is bounded.
- ( ) The region is unbounded.

Find the coordinates of all corner points (if any). (Order your answers from smallest to largest x, then from smallest to largest y. If an answer does not exist, enter DNE.)

$(x, y) = (0,0)$

$(x, y) = (0,5)$

$(x, y) = (2,4)$

$(x, y) = (4,2)$

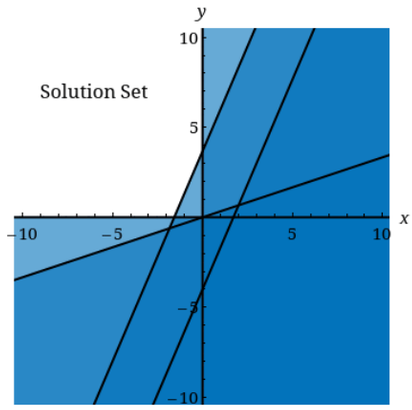
$(x, y) = (5,0)$

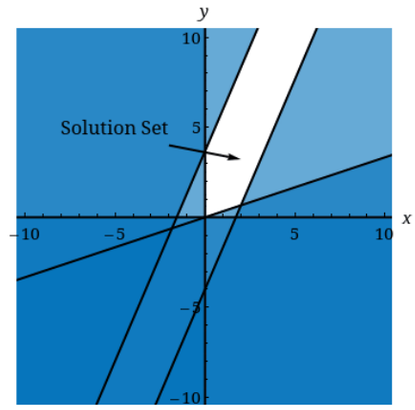
Need Help? Read It

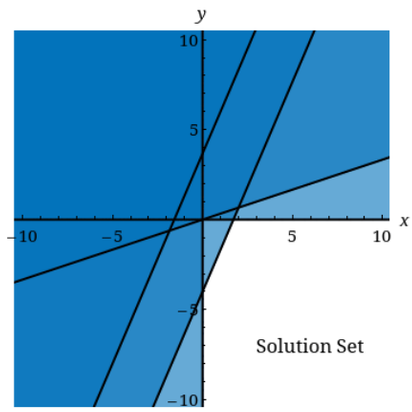
4. [–/1 Points] DETAILS **WANEFMAC7 6.1.023.** MY NOTES ASK YOUR TEACHER PRACTICE ANOTHER

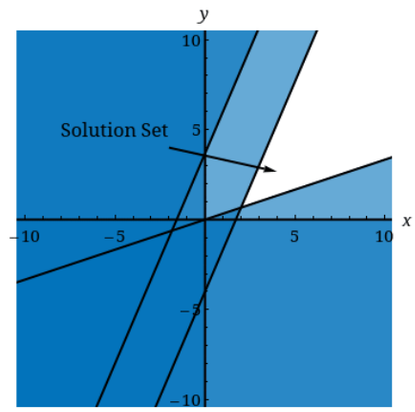
Sketch the region that corresponds to the given inequalities.

$$\begin{aligned} -7x + 3y &\le 11 \\ 7x - 3y &\le 12 \\ x &\le 3y \\ x \ge 0,\ y &\ge 0 \end{aligned}$$









Say whether the region is bounded or unbounded.

- ( ) The region is bounded.
- (●) The region is unbounded.

Find the coordinates of all corner points (if any). (Order your answers from smallest to largest x, then from smallest to largest y. If an answer does not exist, enter DNE.)

$(x, y) = (\quad)$

$(x, y) = (\quad)$

$(x, y) = (\quad)$

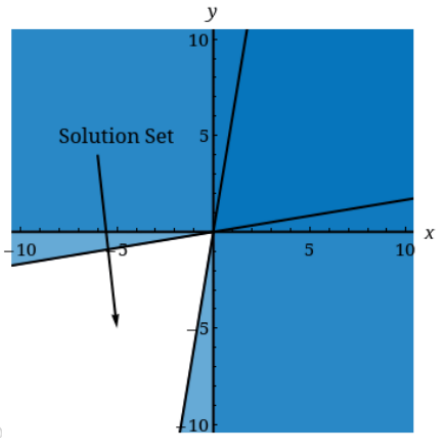
Need Help? Read It Watch It

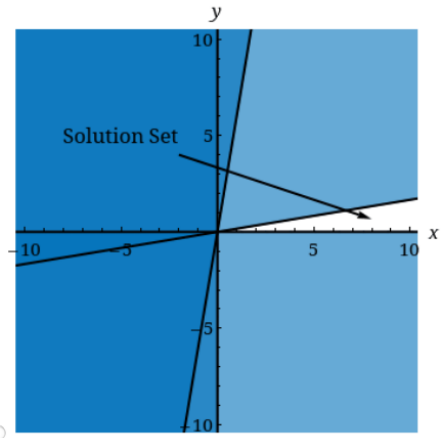
Viewing Saved Work Revert to Last Response

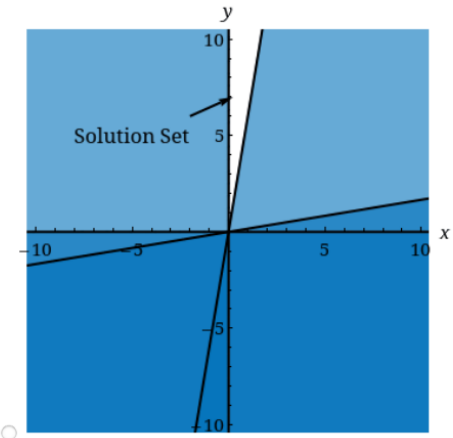
5. [0.66/1 Points] DETAILS PREVIOUS ANSWERS **WANEFMAC7 6.1.025.** MY NOTES ASK YOUR TEACHER PRACTICE ANOTHER

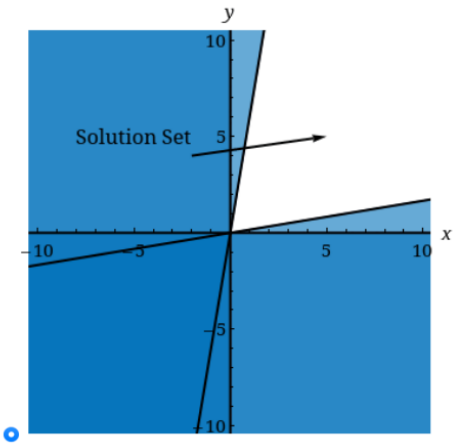
Sketch the region that corresponds to the given inequalities.

$$6x - y \geq 0$$
$$x - 6y \leq 0$$
$$x \geq 0, y \geq 0$$









Say whether the region is bounded or unbounded.

- The region is bounded.
- The region is unbounded.

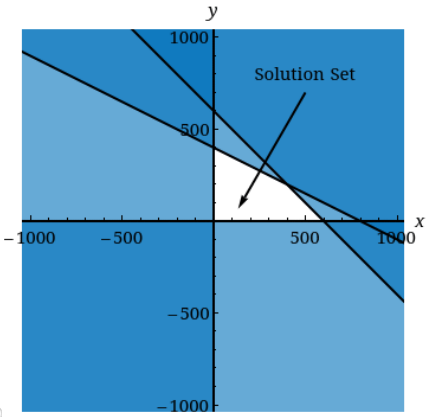
Find the coordinates of all corner points (if any). (If an answer does not exist, enter DNE.)

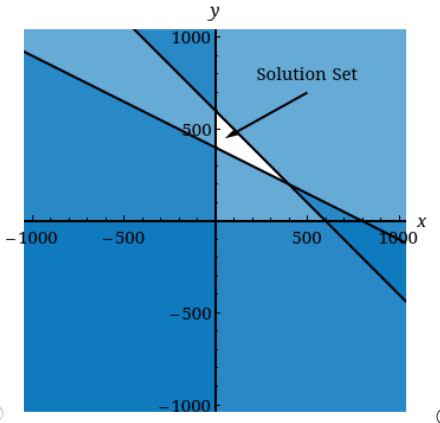
$(x, y) = ($ DNE $)$

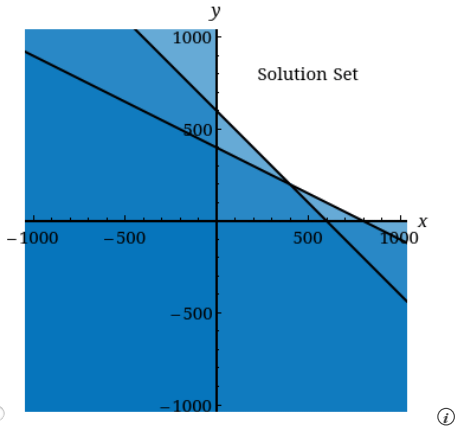
Need Help? Read It

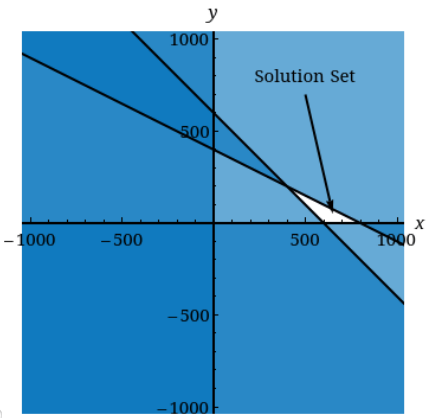
6. [–/1 Points] DETAILS **WANEFMAC7 6.1.033.** MY NOTES ASK YOUR TEACHER PRACTICE ANOTHER

Resource Allocation You manage an ice cream factory that makes two flavors: Creamy Vanilla and Continental Mocha. Into each quart of Creamy Vanilla go 2 eggs and 1 cup of cream. Into each quart of Continental Mocha go 4 eggs and 1 cup of cream. You have in stock 1600 eggs and 600 cups of cream. Draw the feasible region showing the number of quarts of vanilla and number of quarts of mocha that can be produced. (Place Creamy Vanilla on the x-axis and Continental Mocha on the y-axis.)









Find the corner points of the region. (Order your answers from smallest to largest x, then from smallest to largest y. If an answer does not exist, enter DNE.)

$(x, y) = (\quad)$

$(x, y) = (\quad)$

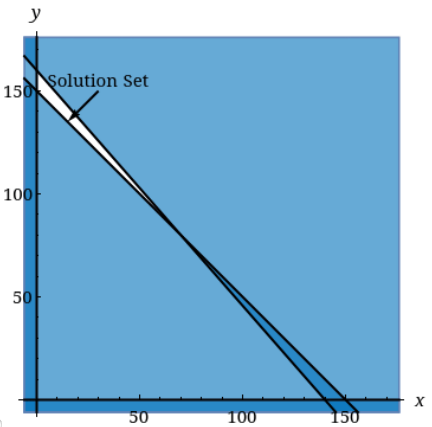
$(x, y) = (\quad)$

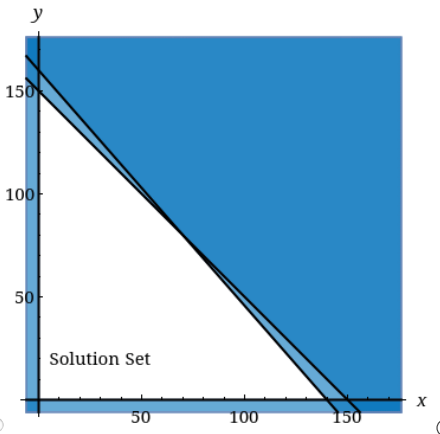
$(x, y) = (\quad)$

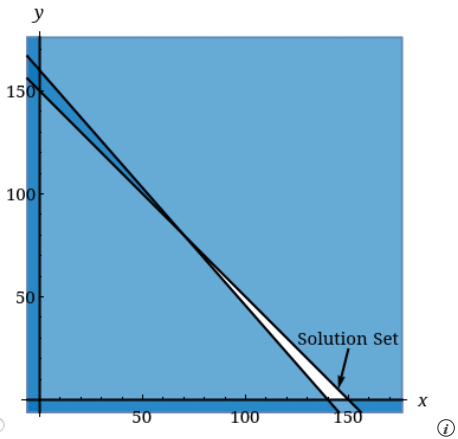
Need Help? Read It

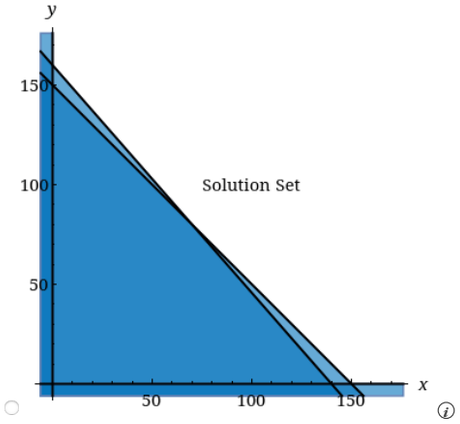
7. [–/1 Points] DETAILS WANEFMAC7 6.1.034.MI. MY NOTES ASK YOUR TEACHER PRACTICE ANOTHER

Resource Allocation Podunk Institute of Technology's Math Department offers two courses: Finite Math and Applied Calculus. Each section of Finite Math has 80 students, and each section of Applied Calculus has 70. The department is allowed to offer a total of up to 150 sections. Furthermore, no more than 11,200 students want to take a math course. (No student will take more than one math course.) Draw the feasible region that shows the number of sections of each class that can be offered. (Place finite math on the x-axis and applied calculus on the y-axis.)









Find the corner points of the region. (Order your answers from smallest to largest x, then from smallest to largest y. If an answer does not exist, enter DNE.)

$(x, y) = ($ $)$

$(x, y) = ($ $)$

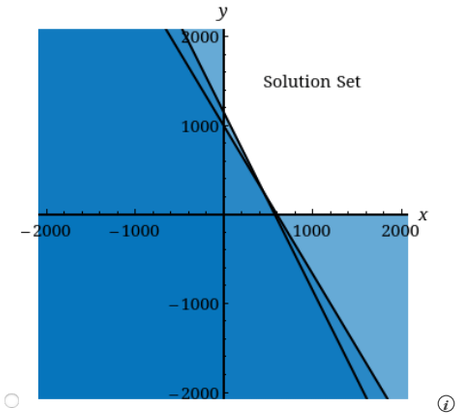
$(x, y) = ($ $)$

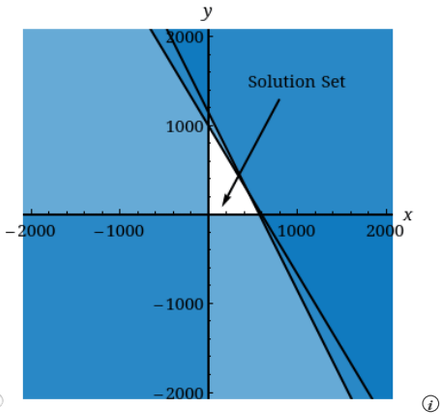
$(x, y) = ($ $)$

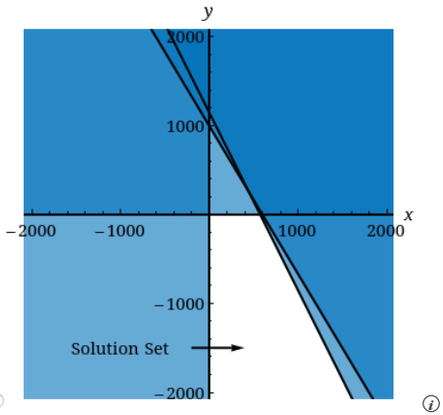
Need Help? Read It Master It

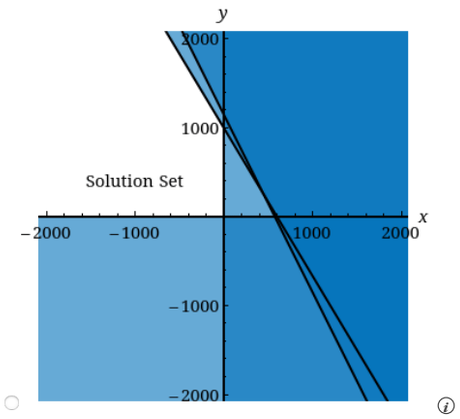
8. [–/1 Points] DETAILS WANEFMAC7 6.1.036. MY NOTES ASK YOUR TEACHER PRACTICE ANOTHER

Purchasing Enormous State University's Business School is buying computers. The school has two models to choose from: the Pomegranate and the iZac. Each Pomegranate comes with 1000 GB of memory and 100 TB of disk space, and each iZac has 600 GB of memory and 50 TB of disk space. For reasons related to its accreditation, the school would like to be able to say that it has a total of at least 600,000 GB of memory and at least 57,500 TB of disk space. Draw the feasible region that shows the number of each kind of computer it can buy. (Place the Pomegranate on the x-axis and the iZac on the y-axis.)









Find the corner points of the region. (Order your answers from smallest to largest x, then from smallest to largest y. If an answer does not exist, enter DNE.)

$(x, y) = ($ $)$

$(x, y) = ($ $)$

$(x, y) = ($ $)$

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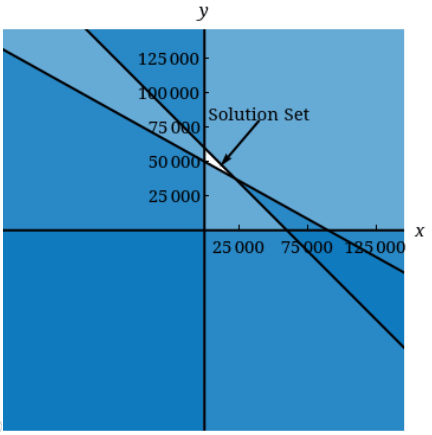
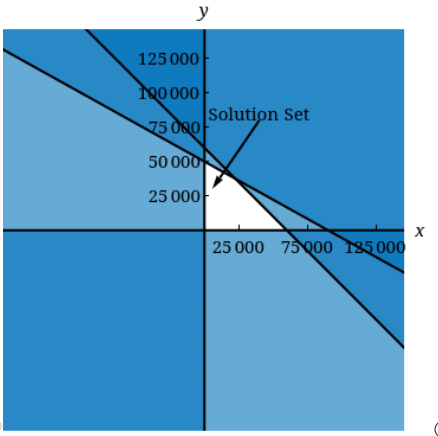
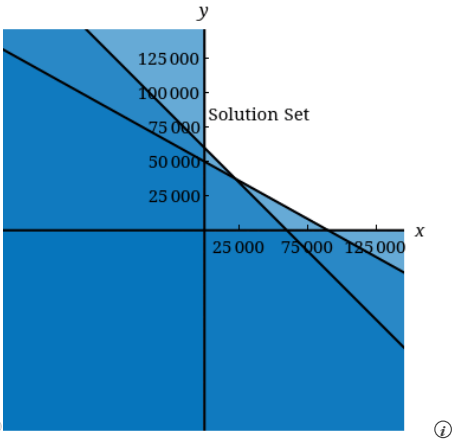
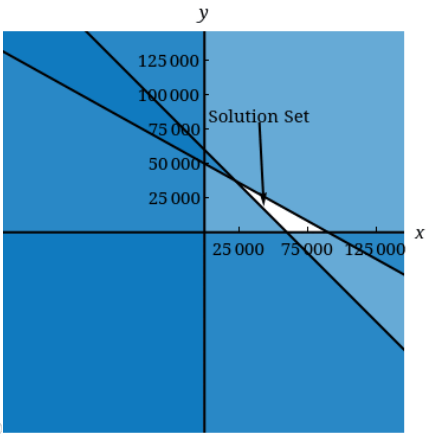
9. [–/1 Points] DETAILS WANEFMAC7 6.1.040. MY NOTES ASK YOUR TEACHER PRACTICE ANOTHER

Mutual Funds Suppose that in a certain year, the Phoenix/Zweig Advisors Zweig Total Return fund (ZTR) was expected to yield 5%, and the Madison Asset Management Madison Strategic Sector Premium fund (MSP) was expected to yield 9%. You would like to invest a total of up to $60,000 and earn at least $4500 in interest. Draw the feasible region that shows how much money you can invest in each fund (based on the given yields). (Place ZTR on the *x*-axis and MSP on the *y*-axis.)









Find the corner points of the region. (Order your answers from smallest to largest *x*, then from smallest to largest *y*. If an answer does not exist, enter DNE.)

(*x*, *y*) = ( )

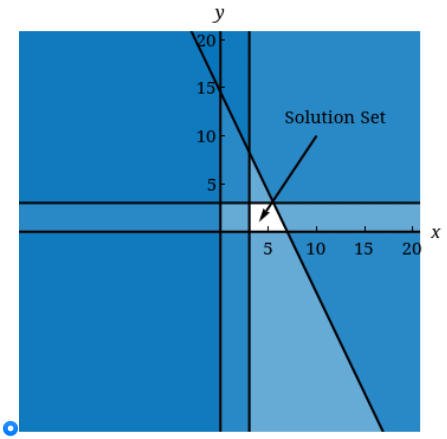
(*x*, *y*) = ( )

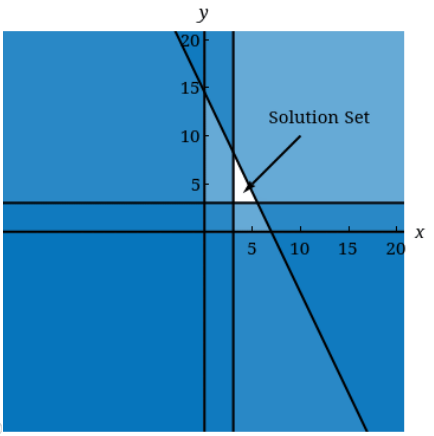
(*x*, *y*) = ( )

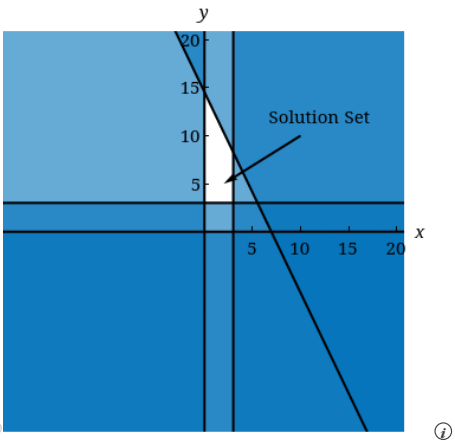
Need Help? Read It

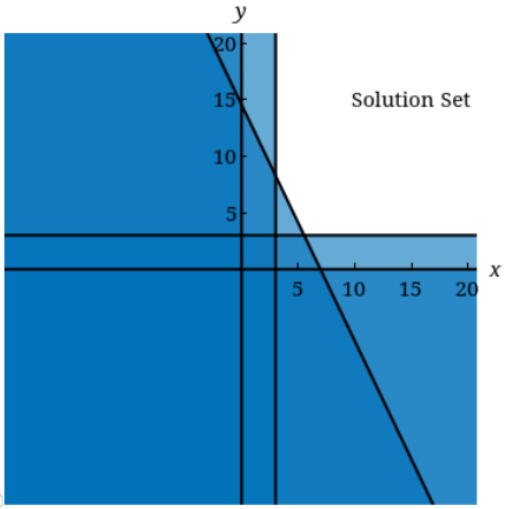
10. [–/1 Points] DETAILS WANEFMAC7 6.1.044. MY NOTES ASK YOUR TEACHER PRACTICE ANOTHER

Advertising You are the marketing director for a company that manufactures bodybuilding supplements and you are planning to run ads in *Magazine A* and *Magazine B*. Based on readership data, you estimate that each one-page ad in *Magazine A* will be read by 575,000 people in your target group, while each one-page ad in *Magazine B* will be read by 275,000 people in your target group. You would like your ads to be read by at least 4 million people in the target group, and, to ensure the broadest possible audience, you would like to place at least three full-page ads in each magazine during the year. Draw the feasible region showing how many pages you can purchase in each magazine. Find the corner points of the region. (Place *Magazine A* on the *x*-axis and *Magazine B* on the *y*-axis.)









Find the corner points of the region. (Order your answers from smallest to largest x, then from smallest to largest y. If an answer does not exist, enter DNE. Round each coordinate to the nearest whole number.)

$(x, y) = (\quad)$

$(x, y) = (\quad)$

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