https://joyfoodsunshine.com/the-most-amazing-chocolate-chip-cookies/

Gil makes two types of cookies. He sells each chocolate chip cookie for $1 and each sugar cookie for $1.50. Gil wants to make at least 100 cookies and earn at least $120. The system of inequalities describes the relationship between the number of chocolate chip cookies (x) and the number of sugar cookies (y) that Gil will make.

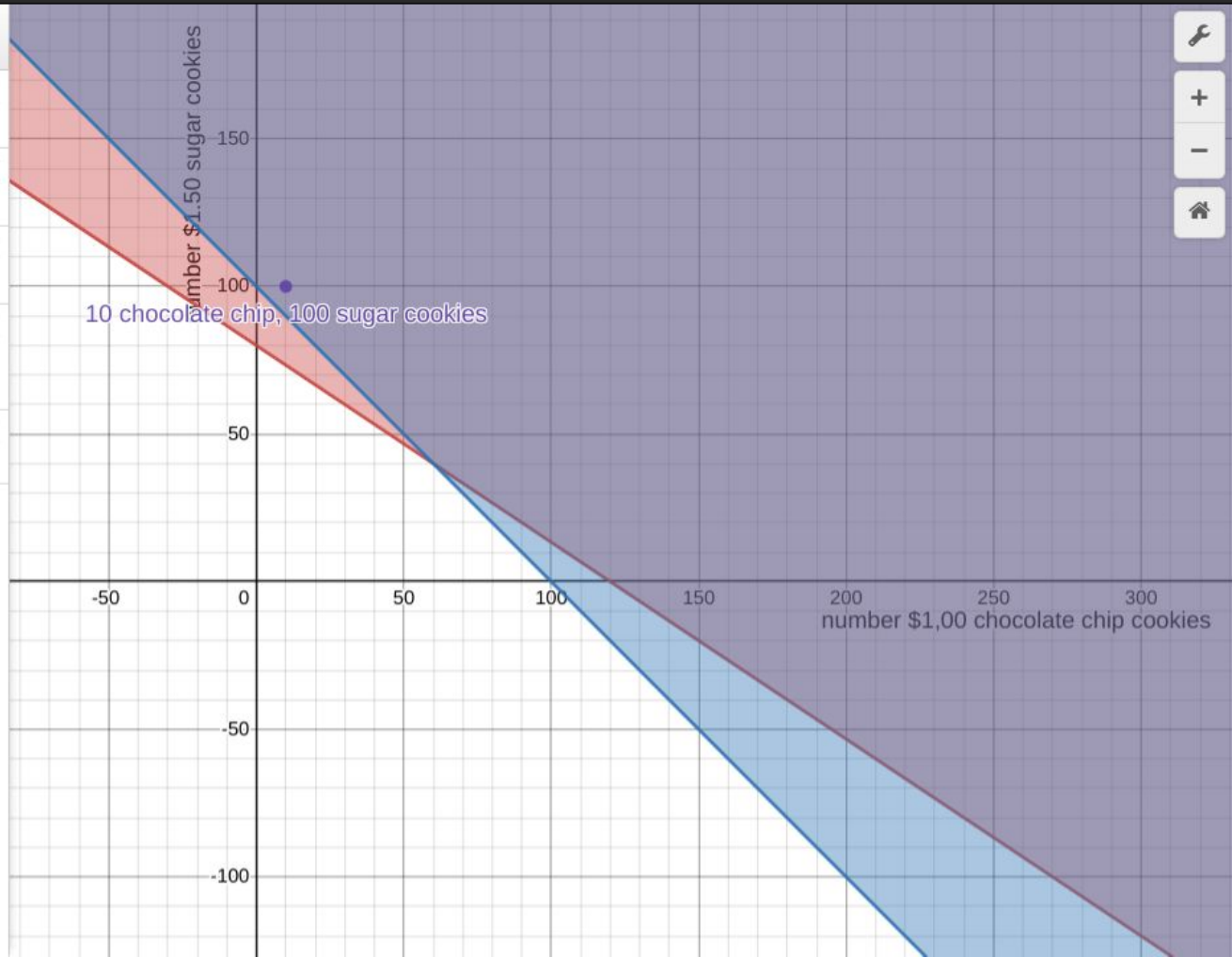
$$x + 1.5y \geq 120$$

$$x + y \geq 100$$

One solution of the system of inequalities is the ordered pair (10, 100). Which statement BEST describes the meaning of the solution?

- (●) Gil could make 10 chocolate chip cookies and 100 sugar cookies.
- ( ) Gil could make 100 chocolate chip cookies and 10 sugar cookies.
- ( ) Gil will make 100 cookies, 10 of which are chocolate chip.
- ( ) Gil will make 100 cookies, 10 of which are sugar cookies.

1. $x + 1.5y \geq 120$
2. $y \geq 80 - 0.667x$
3. $x + y \geq 100$
4. $(10,100)$
   Label: 10 chocolate chip, 100 sugar cookies
5. at least 100 cookies and earn at least $120
6.



powered by desmos

Wikipedia sugar cookies

Your Turn

2. Mrs. Johnson wants to buy her students treats to let them know how great they are. She needs to buy at least 95 treats to make sure each student gets 1. She will buy them either peanut m&m's which cost $2.50 each, or the nut-free option of sour skittles which are $4.00 each. She is buying the big bags, because her students are that great. She has a budget of $300 given to her by the school to buy treats. Write and graph (in **Desmos**) a system of inequalities the represent this situation.

M + S >= 95 mm and skittle number at least 95 candies

M >= 95 - S

M >= -S + 95 (y axis is number of m&m, x is number skittles)

Y >= -S + 95

$2.5M + $4S <= $300 budget divide by 2.5

M + 1.6S <= 120

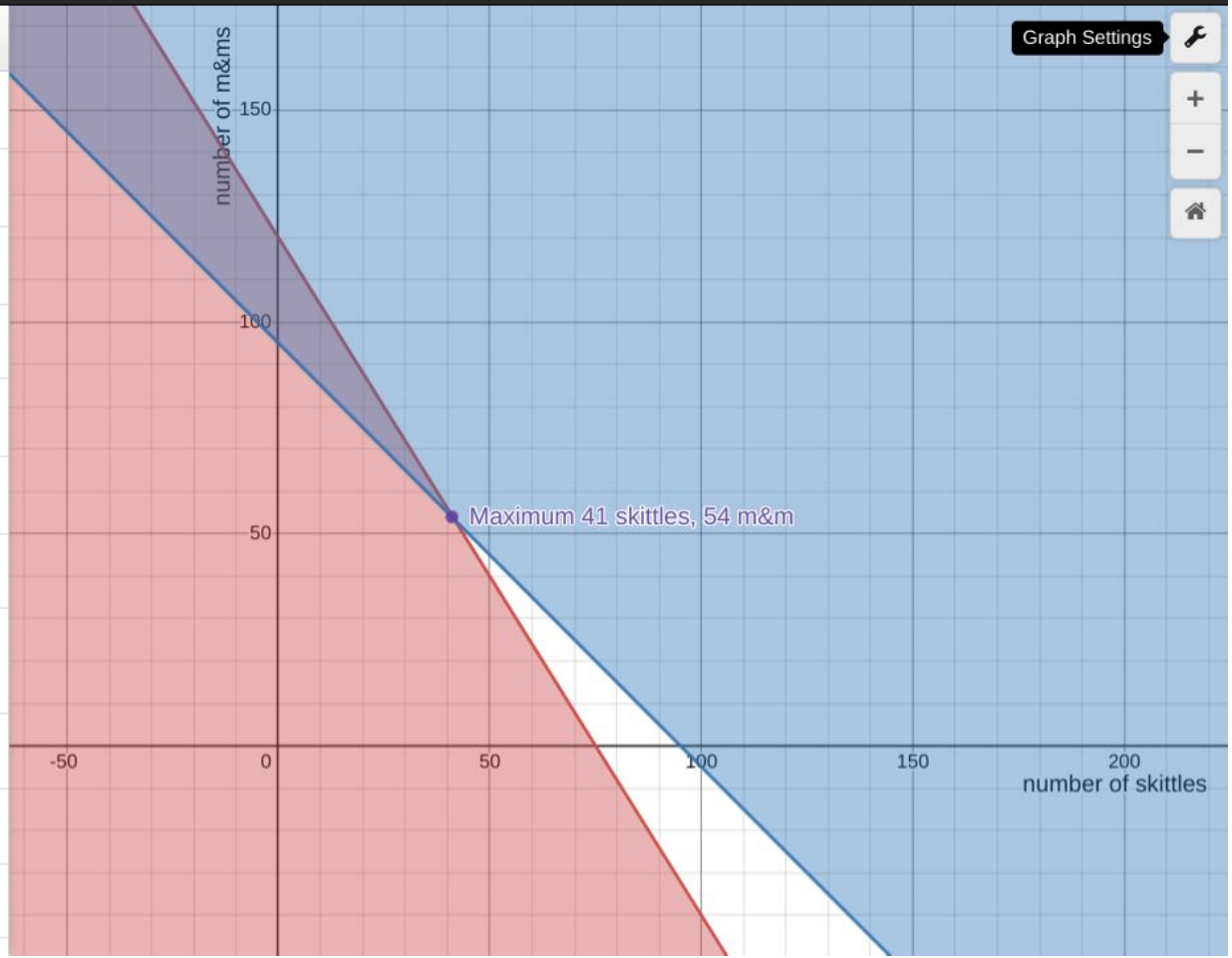
M <= 120 - 1.6 S

M <= -1.6S + 120

Y <= -1.6X + 120

Maximum skittles | Save | desmos | Austin

1. $2.5y + 4x \leq 300$
2. $y + 1.6x \leq 120$
3. $y \leq 120 - 1.6x$
4. $2.50 m&m, $4 skittles, $300 budget
5. $y + x \geq 95$
6. $y \geq 95 - x$
7. m&m plus skittles, need 95 bags or more
8. $(41,54)$
   Label: Maximum 41 skittles, 54 m&m
9. 41 skittles (41)($4) = $164
10. 54 m&m (54)($2.5) = $135
11. $299 cost, under $300 budget.



Maximum skittles | Save | desmos | Austin

1. $2.5y + 4x \leq 300$
2. $y + x \geq 95$
3. $(41,54)$
   Label: Maximum 41 skittles, 54 m&m

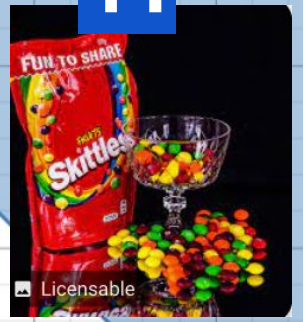
number of m&ms

54.5
54
53.5

Maximum 41 skittles, 54 m&m

54

41



Could buy maximum
41 skittles and 54 m&m
Under $300 budget

Total: 41 + 54 = 95 candy

Cost: (41)($4) + ($2.50)(54) = $299

40 40.5 41 41.5 42 42.5 43

number of skittles

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Question 7

1 / 1 pts

Choose the two inequalities that will make up our system of linear inequalities for the treats. Select two.

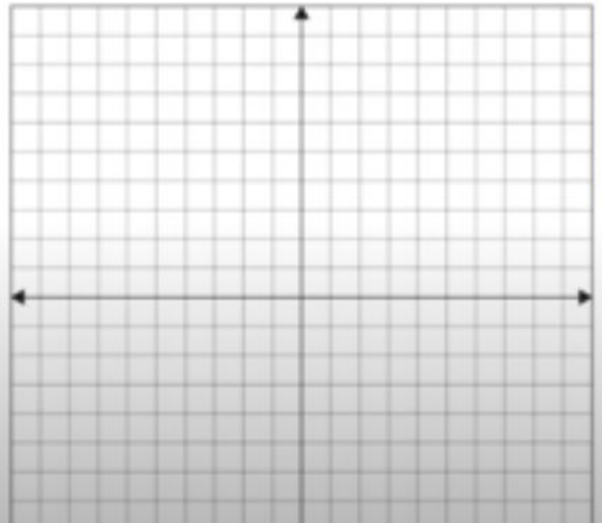
- [ ] $2.50M + 4S \geq 300$
- [x] $2.50M + 4S \leq 300$
- [ ] $2.50M + 4S \leq 95$
- [ ] $M + S \leq 300$
- [x] $M + S \geq 95$
- [ ] $M + S \leq 95$

RECORDING FOR NOTES, AND ACCESS CODE!

Example

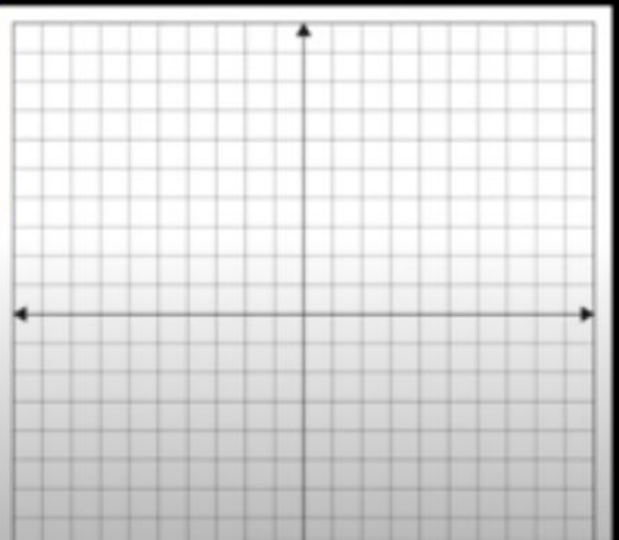
Graph the solution set of the inequality

$2y - 6 > 4x$



peanutmms

Example

Graph the solution set of the inequality

$3x + 2y \leq 12$