

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear inequalities in one or two variables	Hard

ID: 8d93d73a

$y < 5x + 6$

For which of the following tables are all the values of x and their corresponding values of y solutions to the given inequality?

✗

x	y
3	17
5	27
7	37

✓

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B.

x	y
3	17
5	35
7	37

✓
✗

C.

x	y
3	25
5	35
7	45

✗

D.

x	y
3	21
5	31
7	41

✗

Question ID 84f5f182

Assessment	Test	Domain	Skill	Difficulty
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ID: 84f5f182



A salesperson’s total earnings consist of a base salary of x dollars per year, plus commission earnings of **11%** of the total sales the salesperson makes during the year. This year, the salesperson has a goal for the total earnings to be at least **3** times and at most **4** times the base salary. Which of the following inequalities represents all possible values of total sales s , in dollars, the salesperson can make this year in order to meet that goal?

- A. $2x \leq s \leq 3x$
- B. $\frac{2}{0.11}x \leq s \leq \frac{3}{0.11}x$
- C. $3x \leq s \leq 4x$
- D. $\frac{3}{0.11}x \leq s \leq \frac{4}{0.11}x$

Question ID 90f7af74

Assessment	Test	Domain	Skill	Difficulty
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ID: 90f7af74

A small business owner budgets \$2,200 to purchase candles. The owner must purchase a minimum of 200 candles to maintain the discounted pricing. If the owner pays \$4.90 per candle to purchase small candles and \$11.60 per candle to purchase large candles, what is the maximum number of large candles the owner can purchase to stay within the budget and maintain the discounted pricing?

$$\begin{aligned} 4.9x + 11.60y &\leq 2,200 \\ x + y &\geq 200 \end{aligned}$$

→ Desmos

Max $y = 182 //$

Max $x = 17$ and

Question ID e1a1754e

Assessment	Test	Domain	Skill	Difficulty
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ID: e1a1754e

In a set of four consecutive odd integers, where the integers are ordered from least to greatest, the first integer is represented by x . The product of 12 and the fourth odd integer is at most 26 less than the sum of the first and third odd integers. Which inequality represents this situation?

- ~~A.~~ $12(x + 6) \leq x + (x + 4) - 26$
- B. $12(x + 6) \geq \cancel{26} - (x + (x + 4))$
- C. $12(x + \cancel{4}) \leq x + (x + 3) - 26$
- D. $12(x + \cancel{4}) \geq \cancel{26} - (x + (x + 3))$

$x, x + 2, x + 4, x + 6$

$12(x + 6) \leq [x + (x + 4)] - 26 //$

Question ID 8ac533d5

Assessment	Test	Domain	Skill	Difficulty
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ID: 8ac533d5

A business owner plans to purchase the same model of chair for each of the 81 employees. The total budget to spend on these chairs is \$14,000, which includes a 7% sales tax. Which of the following is closest to the maximum possible price per chair, before sales tax, the business owner could pay based on this budget?

- A. \$148.15
- ~~B. \$161.53~~
- C. \$172.84
- D. \$184.94

$$81x(1.07) \leq 14,000$$
$$x \leq 161.5322$$

Question ID b2d50dc7

Assessment	Test	Domain	Skill	Difficulty
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ID: b2d50dc7

$y < 6x + 2$

For which of the following tables are all the values of x and their corresponding values of y solutions to the given inequality?

A.

x	y
3	20
5	32
7	44

✗

B.

x	y
3	16
5	36
7	40

✗

✗

x	y
3	16
5	28
7	40

D.

x	y
3	24
5	36
7	48

✗

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Question ID b2d50dc7

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear inequalities in one or two variables	Hard

ID: b2d50dc7

✗ ทำกับข้อบน

$y < 6x + 2$

For which of the following tables are all the values of x and their corresponding values of y solutions to the given inequality?

A.

x	y
3	20
5	32
7	44

B.

x	y
3	16
5	36
7	40

C.

x	y
3	16
5	28
7	40

D.

x	y
3	24
5	36
7	48

Question ID 56d2643d

Assessment	Test	Domain	Skill	Difficulty
SAT	Math	Algebra	Linear inequalities in one or two variables	Hard

ID: 56d2643d



The triangle inequality theorem states that the sum of any two sides of a triangle must be greater than the length of the third side. If a triangle has side lengths of **6** and **12**, which inequality represents the possible lengths, x , of the third side of the triangle?

- A. $x < 18$
- B. $x > 18$
- C. $6 < x < 18$
- D. $x < 6$ or $x > 18$

Question ID 46f90b4a

Assessment	Test	Domain	Skill	Difficulty
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ID: 46f90b4a

$$\begin{aligned} y &\leq x + 7 \\ y &\geq -2x - 1 \end{aligned}$$

Which point (x, y) is a solution to the given system of inequalities in the xy -plane?

- A. $(-14, 0)$
- B. $(0, -14)$
- C. $(0, 14)$
- ~~D. $(14, 0)$~~

Desmos

Question ID 3ab9020f

Assessment	Test	Domain	Skill	Difficulty
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ID: 3ab9020f

$11x + 14y \leq 115$

Anthony will spend at most \$115 to purchase x small cheese pizzas and y large cheese pizzas for a team dinner. The given inequality represents this situation. Which of the following is the best interpretation of $14y$ in this context?

- A. The amount, in dollars, Anthony will spend on each large cheese pizza y
- B. The amount, in dollars, Anthony will spend on each small cheese pizza x
- ~~C.~~ The total amount, in dollars, Anthony will spend on large cheese pizzas $14y$
- D. The total amount, in dollars, Anthony will spend on small cheese pizzas $11x$

Question ID 89f5185f

Assessment	Test	Domain	Skill	Difficulty
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ID: 89f5185f

$y > 13x - 18$

For which of the following tables are all the values of x and their corresponding values of y solutions to the given inequality?

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A.

x	y
3	21
5	47
8	86

✗

B.

x	y
3	26
5	42
8	86

✗

C.

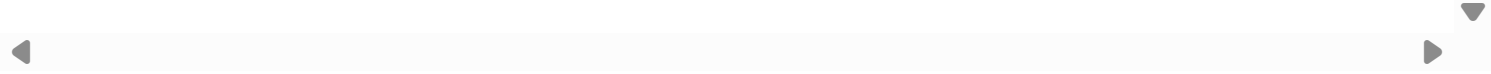
x	y
3	16
5	42
8	81

✗

✗

x	y
3	26

5	52
8	91



Question ID b81a4da4

Assessment	Test	Domain	Skill	Difficulty
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ID: b81a4da4

ตัดออกไปเรื่อยๆ ก็ได้คำตอบ

A team hosting an event to raise money for new uniforms plans to sell at least 140 tickets before this event and at least 220 tickets during this event to raise a total of at least \$5,820 from all tickets sold. The price of a ticket during this event is \$3 less than the price of a ticket before this event. Which inequality represents this situation, where x is the price, in dollars, of a ticket sold during this event?

- A. $140(x + 3) + 220x \geq 5,820$
- ~~B. $140(x + 3) + 220x \geq 5,820$~~
- C. $140(x - 3) + 220x \leq 5,820$
- D. $140(x - 3) + 220x \geq 5,820$

$x = y - 3$ $y = \text{before}$

$\rightarrow y = x + 3$

$x \geq 140$

$y \geq 220 \rightarrow x + 3 \geq 220$

$140x + 220y \geq 5,820$

$\rightarrow 140x + 220(x + 3) \geq 5,820 //$

Question ID c729c1d7

Assessment	Test	Domain	Skill	Difficulty
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ID: c729c1d7



A number x is at most 2 less than 3 times the value of y . If the value of y is -4 , what is the greatest possible value of x ?