Question ID 8d93d73a

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?

A.

x	y
3	17
5	27
7	37

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
SAT	Math	Algebra	Linear inequalities in one or two variables	Hard

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
SAT	Math	Algebra	Linear inequalities in one or two variables	Hard

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?

Question ID e1a1754e

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

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. $12(x+6) \geq 26-(x+(x+4))$

C. $12(x+4) \leq x+(x+3)-26$

D. $12(x+4) \geq 26-(x+(x+3))$

Question ID 8ac533d5

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

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. $\$184.94$

Question ID b2d50dc7

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

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

C.

x	y
3	16
5	28
7	40

D.

x	y
3	24
5	36
7	48

Question ID b2d50dc7

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

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

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
SAT	Math	Algebra	Linear inequalities in one or two variables	Hard

ID: 46f90b4a

$$y \leq x + 7$$
$$y \geq -2x - 1$$

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. $(14, 0)$

Question ID 3ab9020f

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

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

B. The amount, in dollars, Anthony will spend on each small cheese pizza

C. The total amount, in dollars, Anthony will spend on large cheese pizzas

D. The total amount, in dollars, Anthony will spend on small cheese pizzas

Question ID 89f5185f

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

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?

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

D.

x	y
3	26
5	52
8	91

Question ID b81a4da4

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

ID: b81a4da4

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. $140(x+3)+220x \leq 5{,}820$

B. $140(x+3)+220x \geq 5{,}820$

C. $140(x-3)+220x \leq 5{,}820$

D. $140(x-3)+220x \geq 5{,}820$

Question ID c729c1d7

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

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?