

Question ID 9868b7fc

Assessment	Test	Domain	Skill	Difficulty
PSAT/NMSQT & PSAT 10	Math	Algebra	Linear inequalities in one or two variables	<div><div></div><div></div><div></div></div>

ID: 9868b7fc

A model estimates that whales from the genus *Eschrichtius* travel **72** to **77** miles in the ocean each day during their migration. Based on this model, which inequality represents the estimated total number of miles, x , a whale from the genus *Eschrichtius* could travel in **16** days of its migration?

- A. $72 + 16 \leq x \leq 77 + 16$
- B. $(72)(16) \leq x \leq (77)(16)$
- C. $72 \leq 16 + x \leq 77$
- D. $72 \leq 16x \leq 77$

Question ID 7c24f272

Assessment	Test	Domain	Skill	Difficulty
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ID: 7c24f272

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 35f40980

Assessment	Test	Domain	Skill	Difficulty
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ID: 35f40980

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 5ca4fe7f

Assessment	Test	Domain	Skill	Difficulty
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ID: 5ca4fe7f

$y > 13x - 18$

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

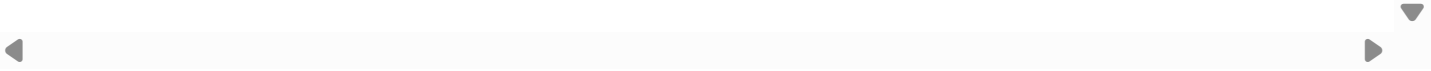
C.

x	y
3	16
5	42
8	81

D.

x	y
3	26
5	52

8	91



Question ID 729bbc01

Assessment	Test	Domain	Skill	Difficulty
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ID: 729bbc01

$$\begin{aligned}y &> 14 \\ 4x + y &< 18\end{aligned}$$

The point $(x, 53)$ is a solution to the system of inequalities in the xy -plane. Which of the following could be the value of x ?

- A. -9
- B. -5
- C. 5
- D. 9

Question ID 309f1dc6

Assessment	Test	Domain	Skill	Difficulty
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ID: 309f1dc6

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

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. $(14, 0)$

Question ID 59e1fbbe

Assessment	Test	Domain	Skill	Difficulty
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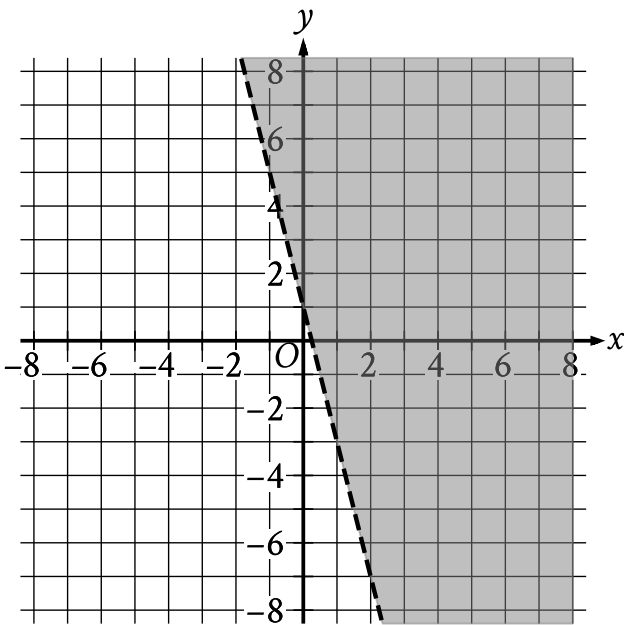
ID: 59e1fbbe

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 ?

Question ID 7ce498a1

Assessment	Test	Domain	Skill	Difficulty
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ID: 7ce498a1



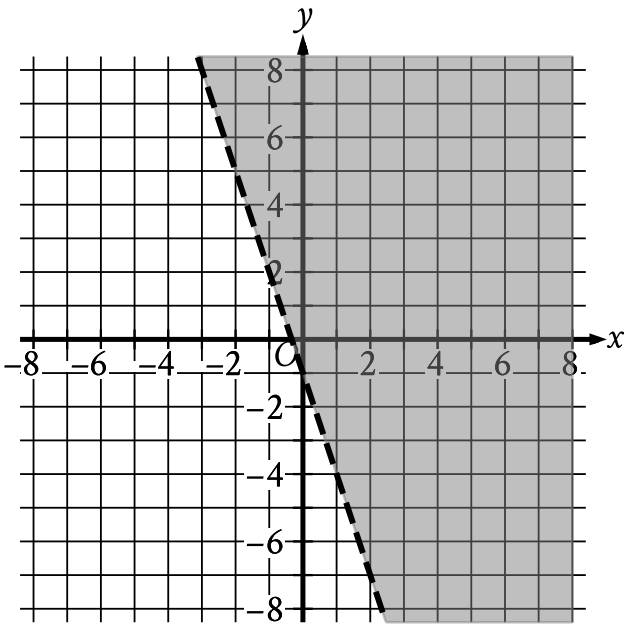
The shaded region shown represents the solutions to which inequality?

- A. $y < 1 + 4x$
- B. $y < 1 - 4x$
- C. $y > 1 + 4x$
- D. $y > 1 - 4x$

Question ID 09834b8b

Assessment	Test	Domain	Skill	Difficulty
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ID: 09834b8b



The shaded region shown represents the solutions to which inequality?

- A. $y < -1 + 3x$
- B. $y < -1 - 3x$
- C. $y > -1 + 3x$
- D. $y > -1 - 3x$

Question ID 30135558

Assessment	Test	Domain	Skill	Difficulty
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ID: 30135558

$y < 6x + 2$

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 30135558

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ID: 30135558

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3	20
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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 09dd5dc0

Assessment	Test	Domain	Skill	Difficulty
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ID: 09dd5dc0

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 365b9585

Assessment	Test	Domain	Skill	Difficulty
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ID: 365b9585

The minimum value of x is **12** less than **6** times another number n . Which inequality shows the possible values of x ?

- A. $x \leq 6n - 12$
- B. $x \geq 6n - 12$
- C. $x \leq 12 - 6n$
- D. $x \geq 12 - 6n$

Question ID 69a5295b

Assessment	Test	Domain	Skill	Difficulty
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ID: 69a5295b

$2x - y > 883$

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

A.

<i>x</i>	<i>y</i>
440	0
441	−2
442	−4

B.

<i>x</i>	<i>y</i>
440	0
442	−2
441	−4

C.

<i>x</i>	<i>y</i>
442	0
440	−2
441	−4

D.

<i>x</i>	<i>y</i>
442	0
441	−2
440	−4

Question ID a06c0a64

Assessment	Test	Domain	Skill	Difficulty
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ID: a06c0a64

A number x is at most **17** less than **5** times the value of y . If the value of y is **3**, what is the greatest possible value of x ?

Question ID a8c33268

Assessment	Test	Domain	Skill	Difficulty
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ID: a8c33268

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 e81b7277

Assessment	Test	Domain	Skill	Difficulty
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ID: e81b7277

$y < 5x + 6$

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 3f6c5272

Assessment	Test	Domain	Skill	Difficulty
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ID: 3f6c5272

A truck can haul a maximum weight of **5,630** pounds. During one trip, the truck will be used to haul a **190**-pound piece of equipment as well as several crates. Some of these crates weigh **25** pounds each and the others weigh **62** pounds each. Which inequality represents the possible combinations of the number of **25**-pound crates, *x*, and the number of **62**-pound crates, *y*, the truck can haul during one trip if only the piece of equipment and the crates are being hauled?

- A. $25x + 62y \leq 5,440$
- B. $25x + 62y \geq 5,440$
- C. $62x + 25y \leq 5,630$
- D. $62x + 25y \geq 5,630$