

Question ID 8a6a48b7

Assessment	Test	Domain	Skill	Difficulty
PSAT 8/9	Math	Algebra	Linear inequalities in one or two variables	Medium

ID: 8a6a48b7

The point $(8, 2)$ in the xy -plane is a solution to which of the following systems of inequalities?

- A. $x > 0$
 $y > 0$
- B. $x > 0$
 $y < 0$
- C. $x < 0$
 $y > 0$
- D. $x < 0$
 $y < 0$

Question ID fb2eb0af

Assessment	Test	Domain	Skill	Difficulty
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ID: fb2eb0af

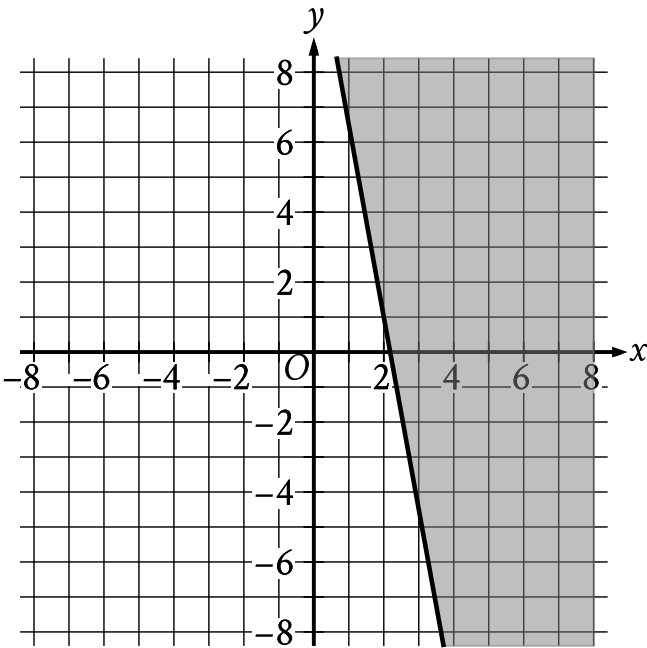
On a car trip, Rhett and Jessica each drove for part of the trip, and the total distance they drove was under **220** miles. Rhett drove at an average speed of **35 miles per hour (mph)**, and Jessica drove at an average speed of **40 mph**. Which of the following inequalities represents this situation, where ***r*** is the number of hours Rhett drove and ***j*** is the number of hours Jessica drove?

- A. **$35r + 40j > 220$**
- B. **$35r + 40j < 220$**
- C. **$40r + 35j > 220$**
- D. **$40r + 35j < 220$**

Question ID 90298d0c

Assessment	Test	Domain	Skill	Difficulty
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ID: 90298d0c



The shaded region shown represents solutions to an inequality. Which ordered pair (x, y) is a solution to this inequality?

- A. $(0, -4)$
- B. $(0, 4)$
- C. $(-4, 0)$
- D. $(4, 0)$

Question ID fecc76fb

Assessment	Test	Domain	Skill	Difficulty
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ID: fecc76fb

During a portion of a flight, a small airplane's cruising speed varied between **150** miles per hour and **170** miles per hour. Which inequality best represents this situation, where *s* is the cruising speed, in miles per hour, during this portion of the flight?

- A. $s \leq 20$
- B. $s \leq 150$
- C. $s \leq 170$
- D. $150 \leq s \leq 170$

Question ID a72ab42b

Assessment	Test	Domain	Skill	Difficulty
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ID: a72ab42b

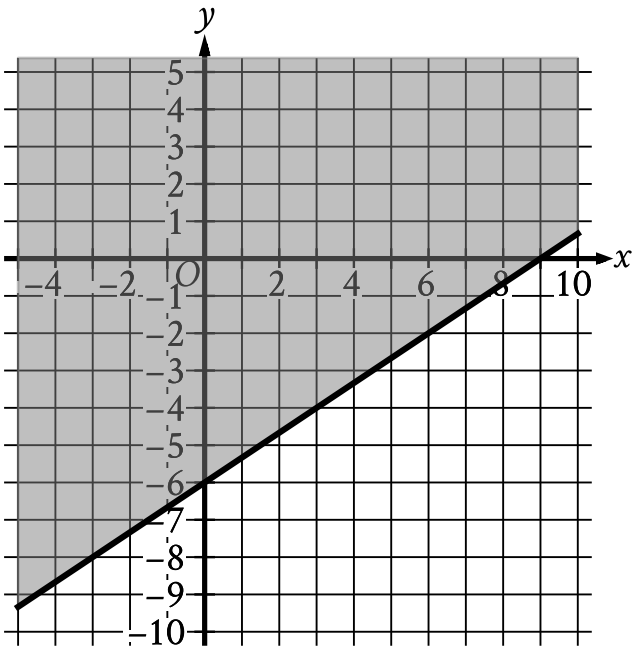
A cleaning service that cleans both offices and homes can clean at most **14** places per day. Which inequality represents this situation, where ***f*** is the number of offices and ***h*** is the number of homes?

- A. $f + h \leq 14$
- B. $f + h \geq 14$
- C. $f - h \leq 14$
- D. $f - h \geq 14$

Question ID 06313578

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ID: 06313578



The shaded region shown represents the solutions to which inequality?

- A. $y \geq \frac{2}{3}x - 6$
- B. $y \geq \frac{2}{3}x + 6$
- C. $y \geq \frac{2}{3}x - 9$
- D. $y \geq \frac{2}{3}x + 9$

Question ID 2a668eec

Assessment	Test	Domain	Skill	Difficulty
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ID: 2a668eec

$$2\ell + 2w \leq 27$$

A rectangle has length ℓ and width w . The inequality gives the possible values of ℓ and w for which the perimeter of this rectangle is less than or equal to **27**. Which statement is the best interpretation of $(\ell, w) = (8, 3)$ in this context?

- A. If the rectangle has length **3** and width **8**, its perimeter is less than or equal to **27**.
- B. If the rectangle has length **8** and width **3**, its perimeter is less than or equal to **27**.
- C. If the rectangle has length **3** and width **8**, its perimeter is greater than or equal to **27**.
- D. If the rectangle has length **8** and width **3**, its perimeter is greater than or equal to **27**.

Question ID 039e86a4

Assessment	Test	Domain	Skill	Difficulty
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ID: 039e86a4

During spring migration, a dragonfly traveled a minimum of **1,510** miles and a maximum of **4,130** miles between stopover locations. Which inequality represents this situation, where ***d*** is a possible distance, in miles, this dragonfly traveled between stopover locations during spring migration?

- A. $d \leq 1,510$
- B. $1,510 \leq d \leq 4,130$
- C. $d \geq 4,130$
- D. $4,130 \leq d \leq 5,640$

Question ID b70a9861

Assessment	Test	Domain	Skill	Difficulty
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ID: b70a9861

A geologist estimates that the volume of a slab of granite is greater than **12.7** cubic feet but less than **15.7** cubic feet. The geologist also estimates that the slab of granite weighs **165** pounds per cubic foot of volume. Which inequality represents this situation, where x represents the estimated total weight, in pounds, of the slab of granite?

- A. $165 - 15.7 < x < 165 - 12.7$
- B. $165 + 12.7 < x < 165 + 15.7$
- C. $165(12.7) < x < 165(15.7)$
- D. $\frac{165}{15.7} < x < \frac{165}{12.7}$

Question ID d7546d9f

Assessment	Test	Domain	Skill	Difficulty
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ID: d7546d9f

For a party, **50** dinner rolls are needed. Dinner rolls are sold in packages of **12**. What is the minimum number of packages that should be bought for the party?

Question ID 3838d947

Assessment	Test	Domain	Skill	Difficulty
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ID: 3838d947

Ty set a goal to walk at least **24** kilometers every day to prepare for a multiday hike. On a certain day, Ty plans to walk at an average speed of **4** kilometers per hour. What is the minimum number of hours Ty must walk on that day to fulfill the daily goal?

- A. **4**
- B. **6**
- C. **20**
- D. **24**

Question ID 3f8c36d6

Assessment	Test	Domain	Skill	Difficulty
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ID: 3f8c36d6

For a **3**-week period in a town in Illinois, the lowest recorded temperature was **31** degrees Fahrenheit (**°F**) and the highest recorded temperature was **67°F**. Which inequality is true for any recorded temperature *t*, in **°F**, in this town for this **3**-week period?

- A. $t \geq 98$
- B. $t \geq 67$
- C. $31 \leq t \leq 67$
- D. $t \leq 31$