

$$|n - 1| < 4$$

- How many integers n satisfy the inequality above?
 - Two
 - Five
 - Seven
 - Nine
- If $|x| \leq 2$ and $|y| \leq 1$, then what is the least possible value of $x - y$?
 - 3
 - 2
 - 1
 - 0
- If $\left|\frac{1}{2}x\right| \geq \frac{1}{2}$, then which statement must be true?
 - $x \leq -2$ or $x \geq 2$
 - $x \leq -1$ or $x \geq 1$
 - $x \leq -\frac{1}{2}$ or $x \geq \frac{1}{2}$
 - $-1 \leq x \leq 1$
- If $\frac{1}{2}|x|$ and $|y| = x + 1$, then y^2 could be
 - 2
 - 3
 - 4
 - 9
- In a certain greenhouse for plants, the Fahrenheit temperature, F , is controlled so that it does *not* vary from 79° by more than 7° . Which of the following best expresses the possible range in Fahrenheit temperatures of the greenhouse?
 - $|F - 79| \leq 7$
 - $|F - 79| > 7$
 - $|F - 7| \leq 79$
 - $|F - 7| > 79$
- If $\frac{|a+3|}{2} = 1$ and $2|b+1| = 6$, then $|a+b|$ could equal any of the following EXCEPT
 - 1
 - 3
 - 5
 - 7

7. For what value of x is $|1 + x| = |1 - x|$?

- (A) No value
- (B) 1
- (C) -1
- (D) 0

$$-1 < x < 3$$

8. The inequality above is equivalent to which of the following?

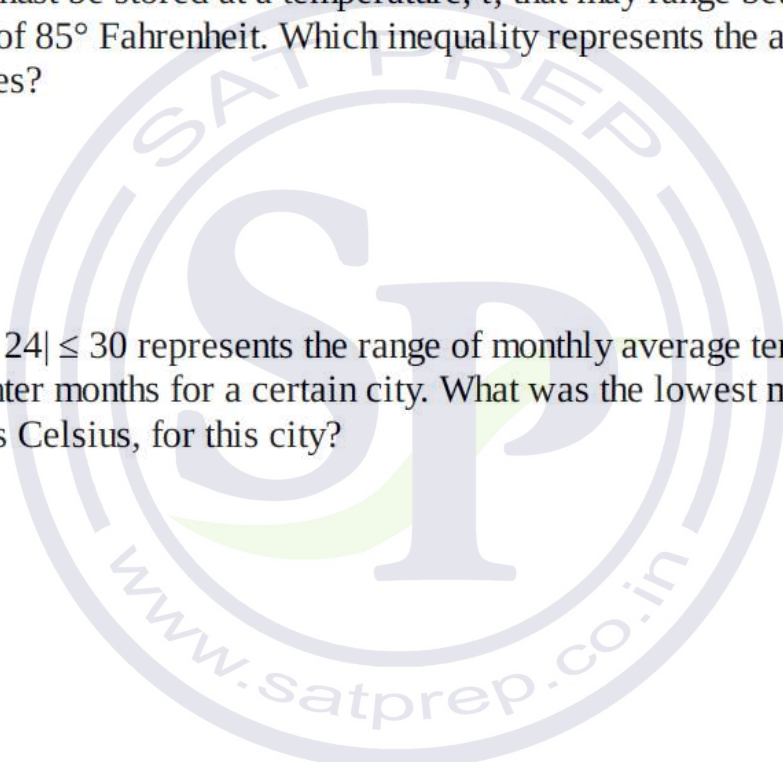
- (A) $|x - 1| < 2$
- (B) $|x + 1| < 2$
- (C) $|x - 2| < 1$
- (D) $|x + 2| < 1$

9. A certain medication must be stored at a temperature, t , that may range between a low of 45° Fahrenheit and a high of 85° Fahrenheit. Which inequality represents the allowable range of Fahrenheit temperatures?

- (A) $|t - 65| \leq 20$
- (B) $|t + 20| \leq 65$
- (C) $|t + 65| \leq 20$
- (D) $|t - 20| \leq 85$

10. The inequality $|1.5C - 24| \leq 30$ represents the range of monthly average temperatures, C , in degrees Celsius, during the winter months for a certain city. What was the lowest monthly average temperature, in degrees Celsius, for this city?

- (A) -4
- (B) 0
- (C) 6
- (D) 9



Grid-In

$$|t - 7| = 4$$

$$|9 - t| = 2$$

1. What value of t satisfies both of the above equations?

2. If $|-3y + 2| < 1$, what is one possible value of y ?

3. If $|x - 16| \leq 4$ and $|y - 6| \leq 2$, what is the greatest possible value of $x - y$?

4. An ocean depth finder shows the number of feet in the depth of water at a certain place. The difference between d , the actual depth of the water, and the depth finder reading, x , is $|d - x|$ and must be less than or equal to $0.05d$. If the depth finder reading is 620 feet, what is the *maximum* value of the actual depth of the water, to the *nearest* foot?