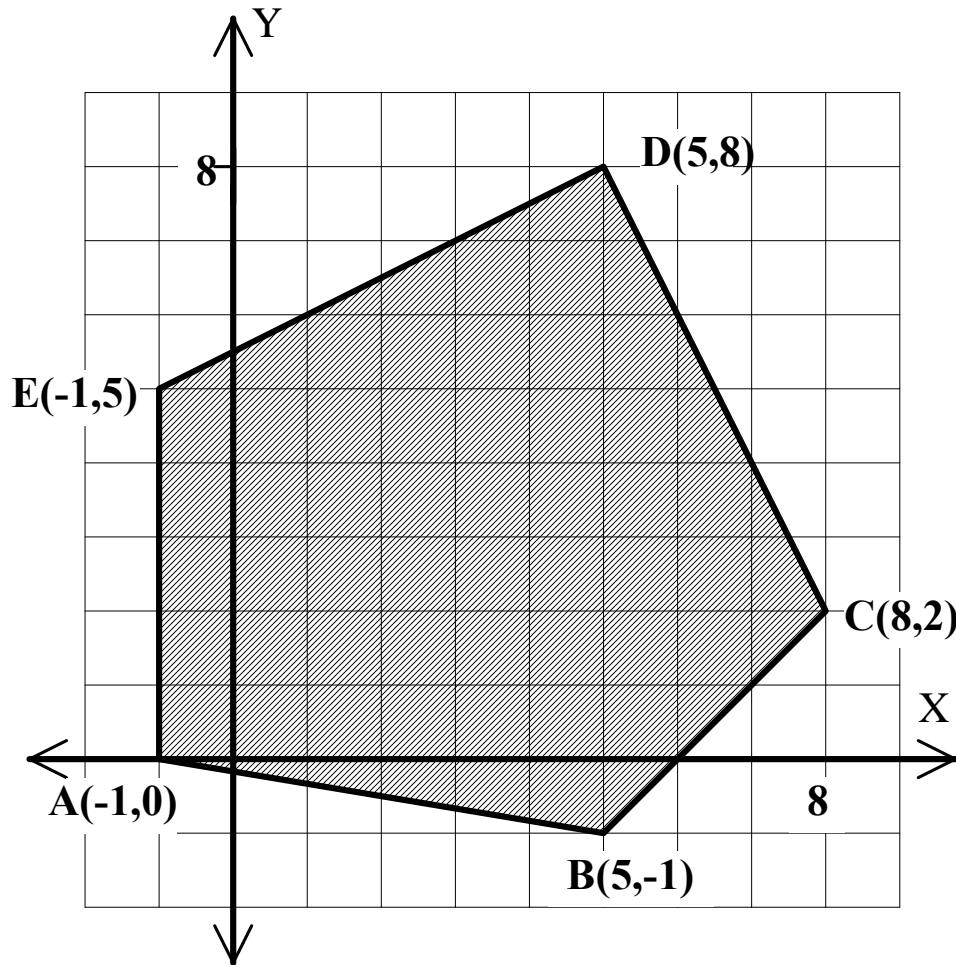


General Algebra II
Lesson #1 Unit 5
Class Worksheet #1
For Worksheets #1 and #2

General Algebra II CWS #1 Unit 5

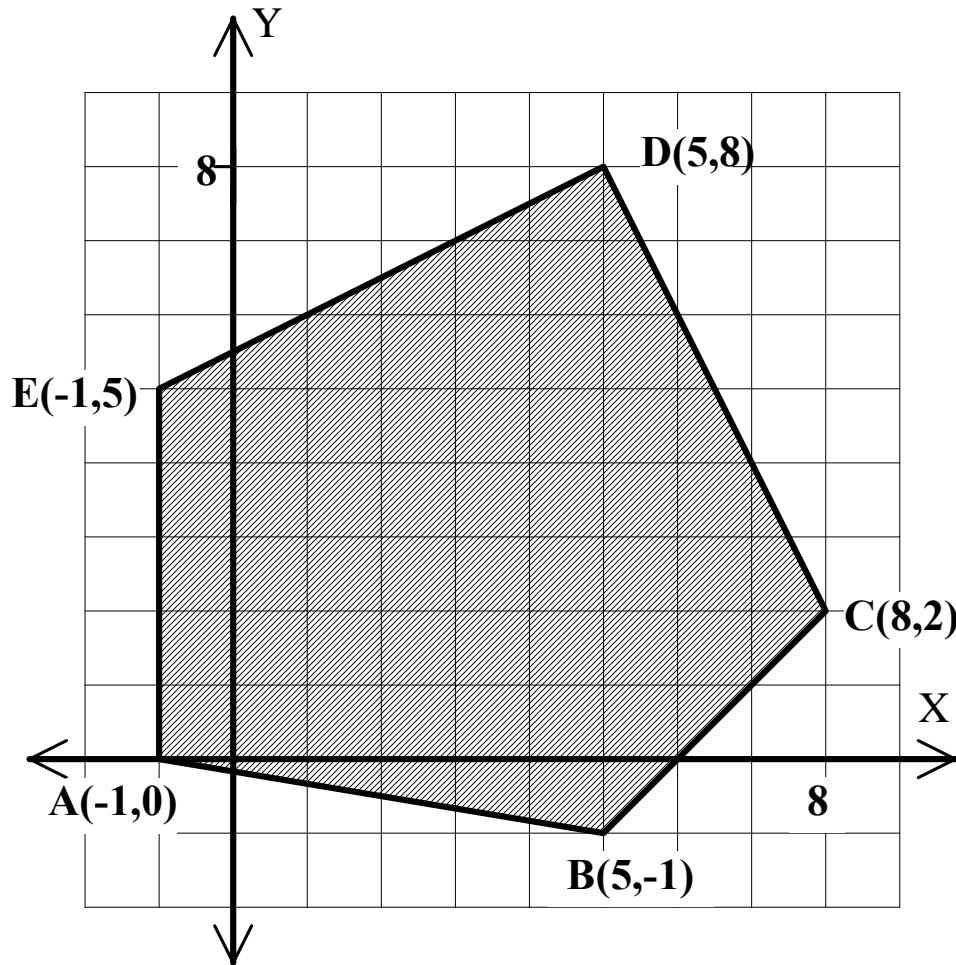


1. $T = 3x + 5y$

$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

$T_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

General Algebra II CWS #1 Unit 5



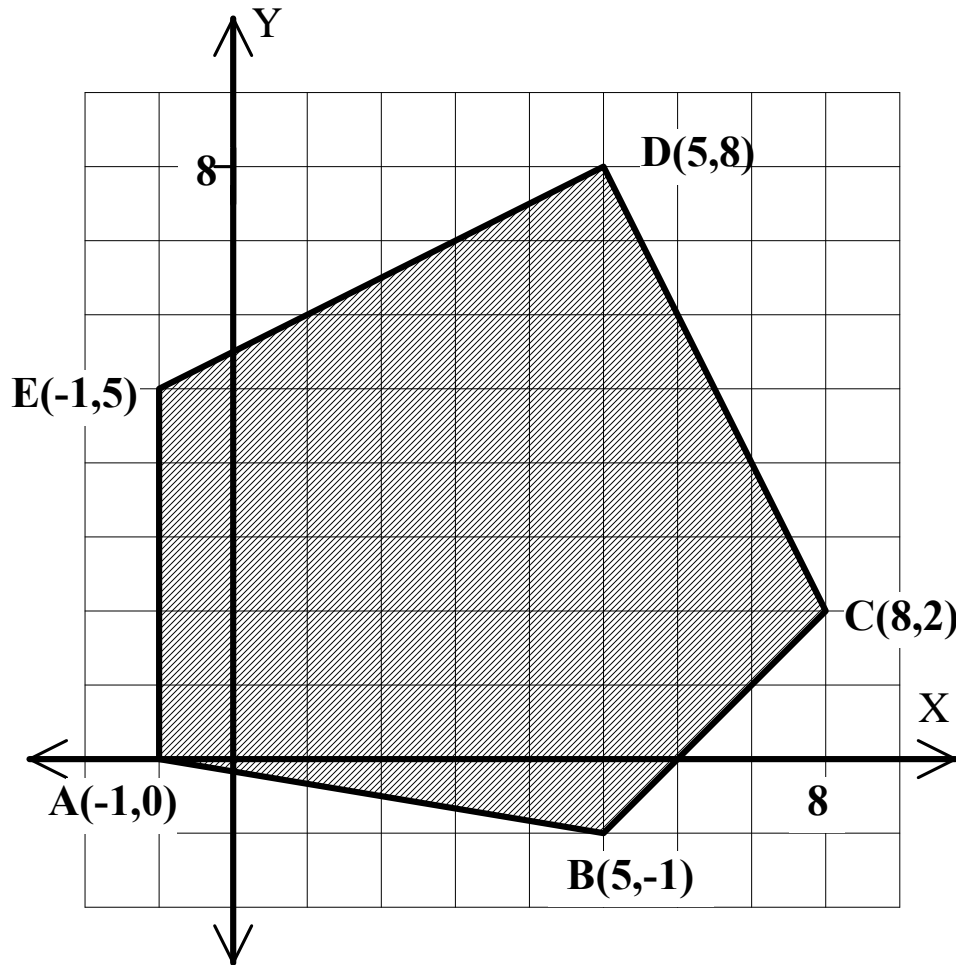
The **maximum** and the **minimum** values of T will occur at a vertex of the region.

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General Algebra II CWS #1 Unit 5



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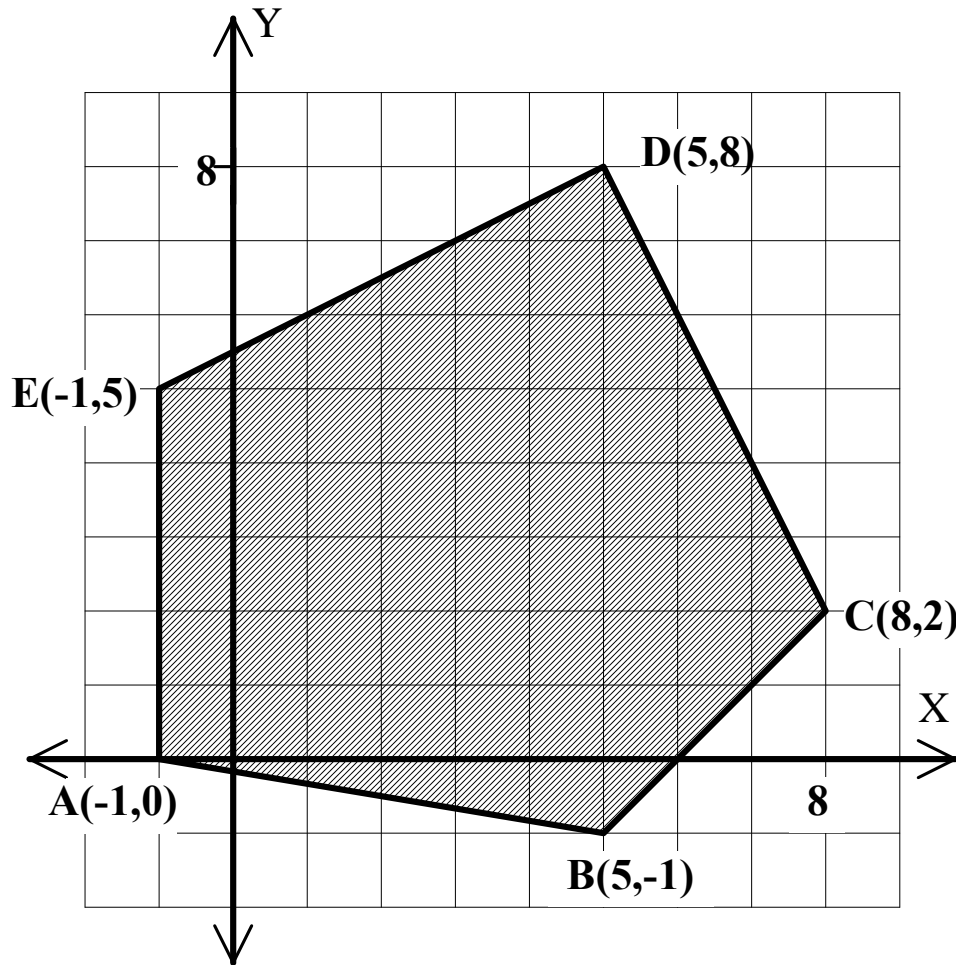
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General Algebra II CWS #1 Unit 5



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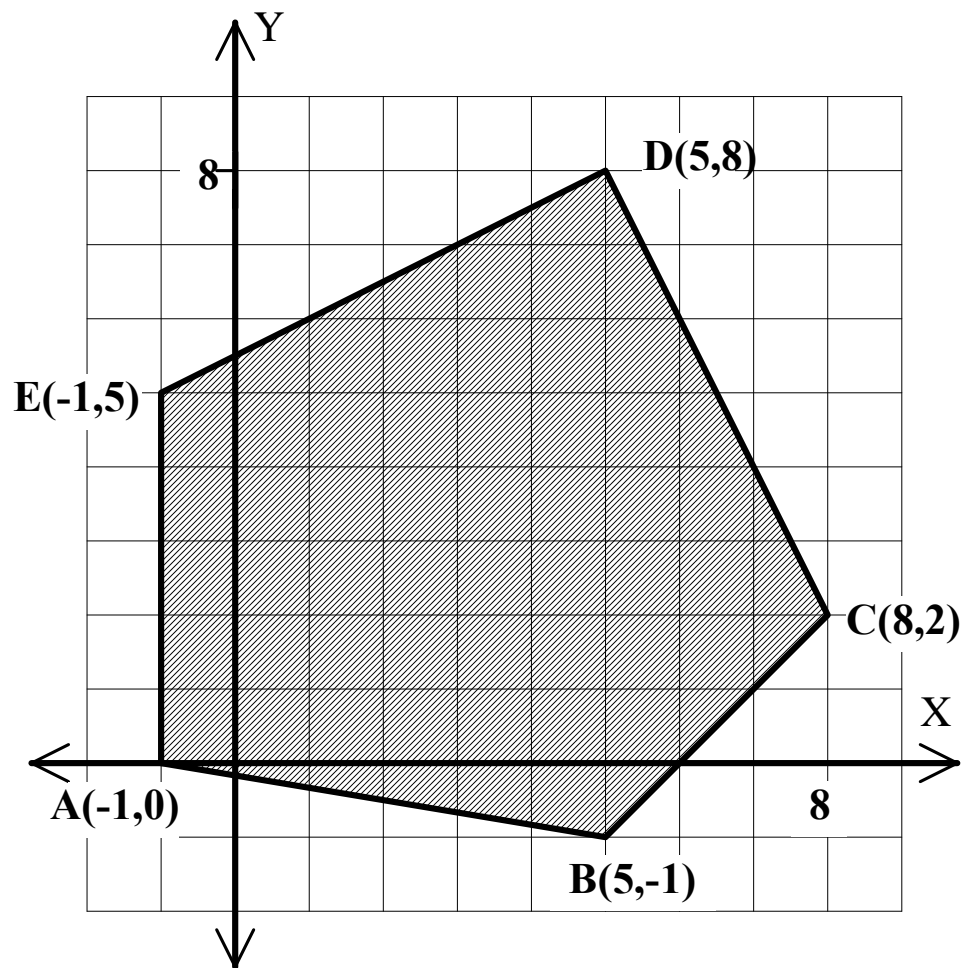
$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

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At A(-1,0) $\implies T = -3 + 0 = -3$

At B(5,-1) $\implies T = 15 + -5 = \mathbf{10}$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

1. $T = 3x + 5y$

$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

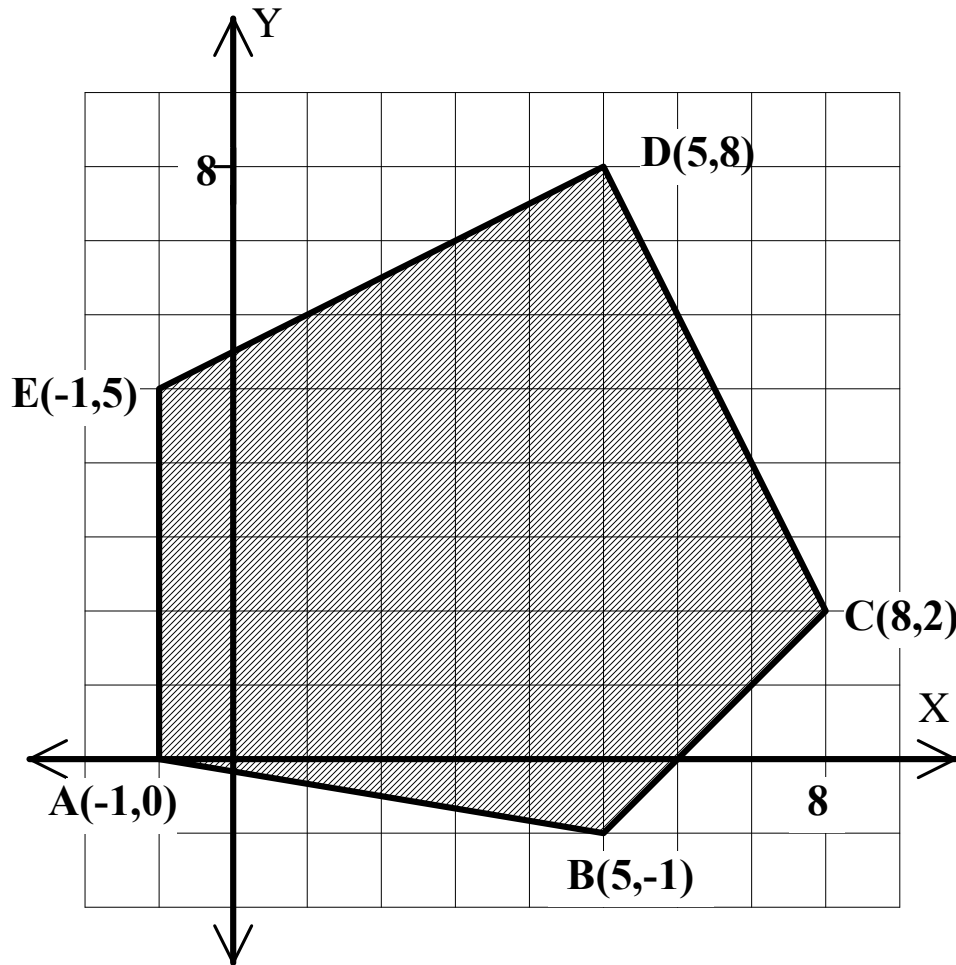
$T_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

At A(-1,0) $\implies T = -3 + 0 = -3$

At B(5,-1) $\implies T = 15 + -5 = 10$

At C(8,2) $\implies T = 24 + 10 = 34$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

1. $T = 3x + 5y$

$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

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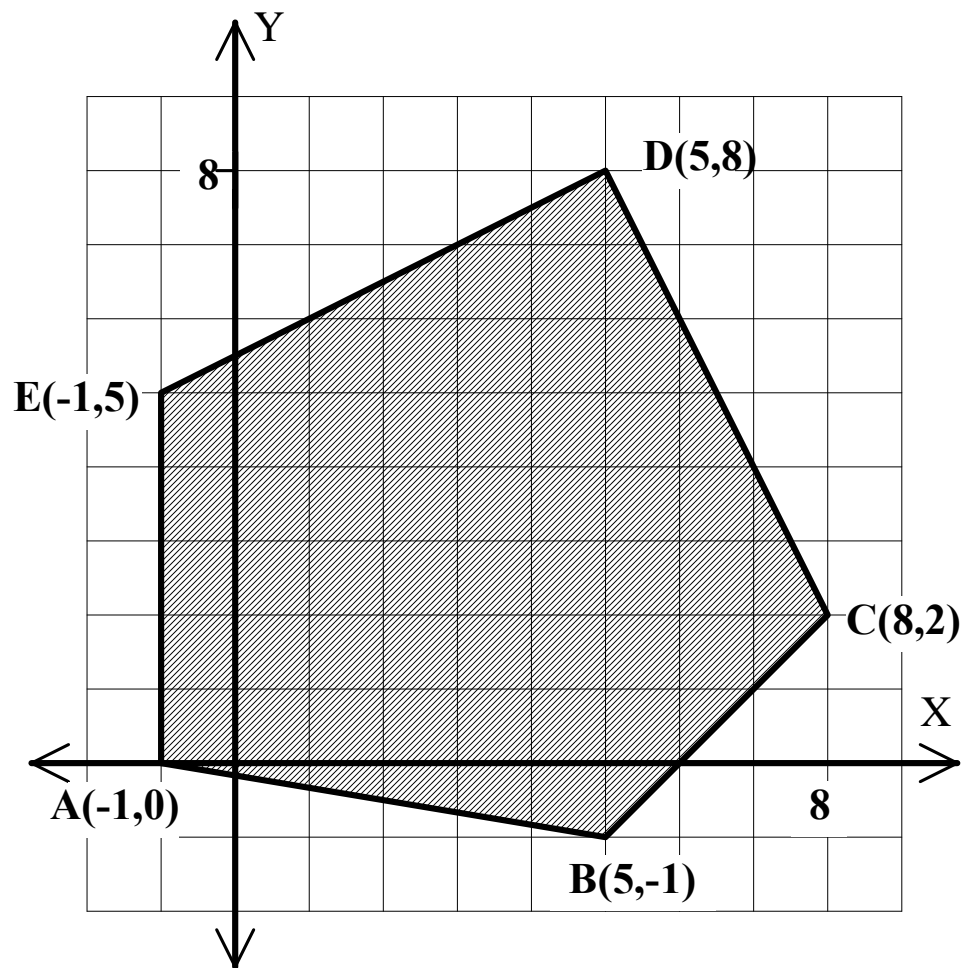
At A(-1,0) $\implies T = -3 + 0 = -3$

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At C(8,2) $\implies T = 24 + 10 = 34$

At D(5,8) $\implies T = 15 + 40 = 55$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

1. $T = 3x + 5y$

$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

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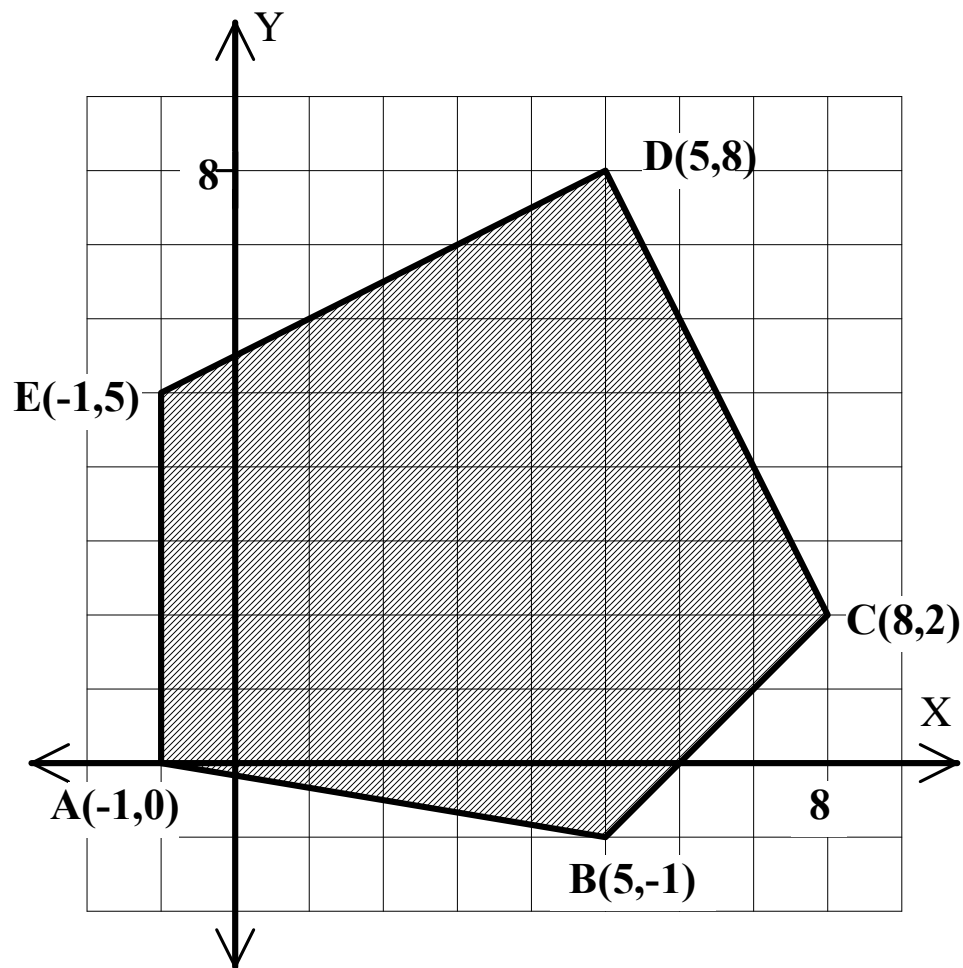
At B(5,-1) $\implies T = 15 + -5 = 10$

At C(8,2) $\implies T = 24 + 10 = 34$

At D(5,8) $\implies T = 15 + 40 = 55$

At E(-1,5) $\implies T = -3 + 25 = 22$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

1. $T = 3x + 5y$

$T_{\max} = \underline{55}$ at $\underline{(5,8)}$

$T_{\min} = \underline{\quad}$ at $\underline{\quad}$

At A(-1,0) $\implies T = -3 + 0 = -3$

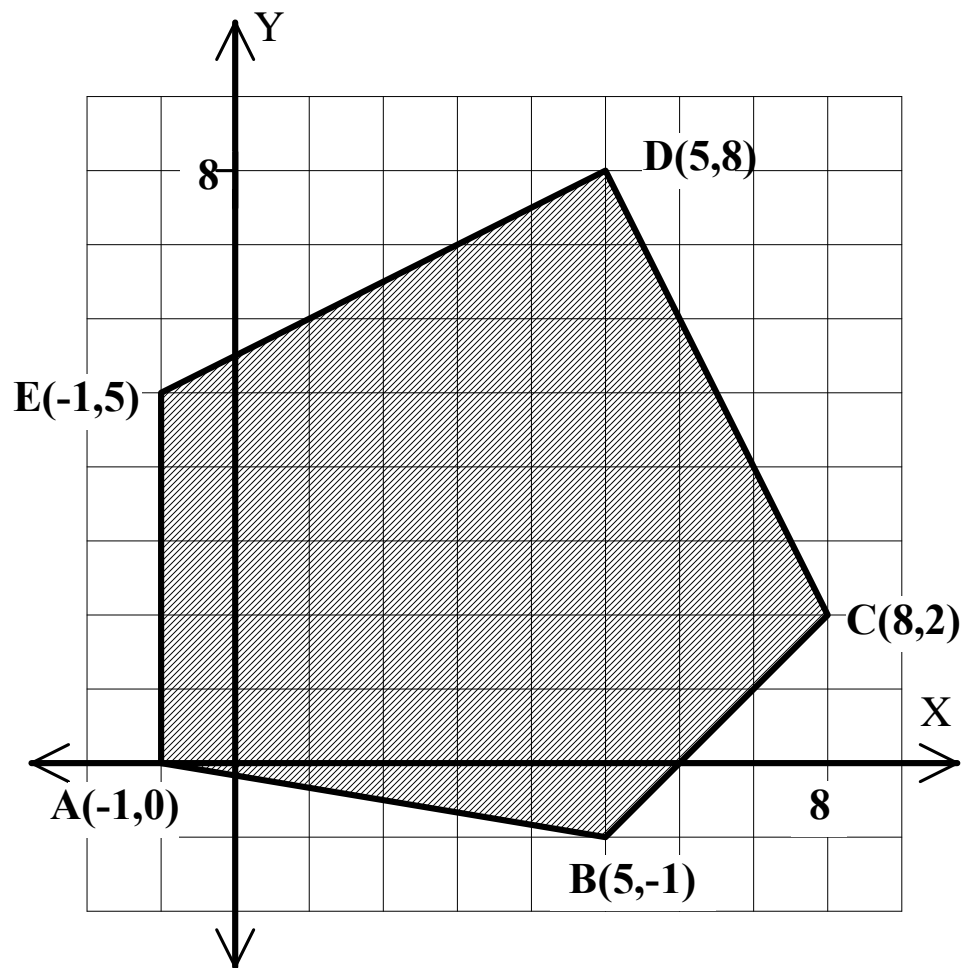
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General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

1. $T = 3x + 5y$

$$T_{\max} = \underline{55} \quad \text{at} \quad \underline{(5,8)}$$

$$T_{\min} = \underline{-3} \quad \text{at} \quad \underline{(-1,0)}$$

$$\text{At } A(-1,0) \implies T = -3 + 0 = \mathbf{-3}$$

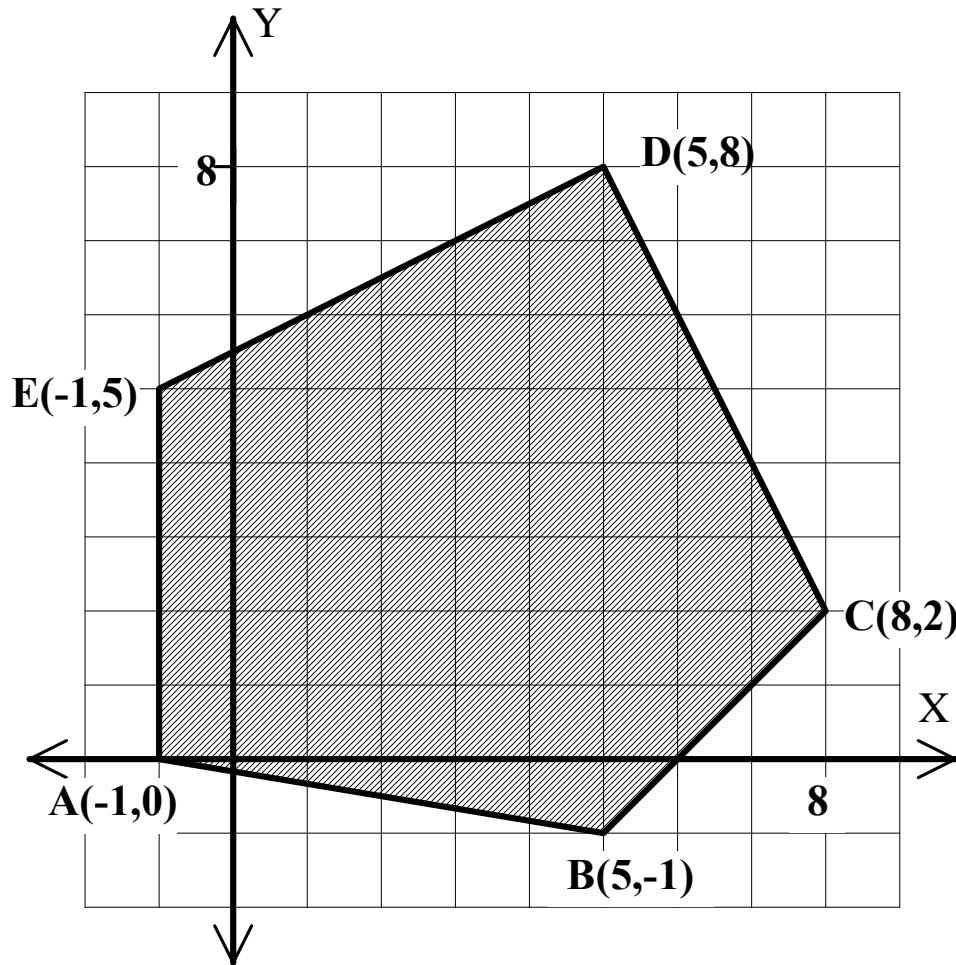
$$\text{At } B(5,-1) \implies T = 15 + -5 = \mathbf{10}$$

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$$\text{At } D(5,8) \implies T = 15 + 40 = \mathbf{55}$$

$$\text{At } E(-1,5) \implies T = -3 + 25 = \mathbf{22}$$

General Algebra II CWS #1 Unit 5



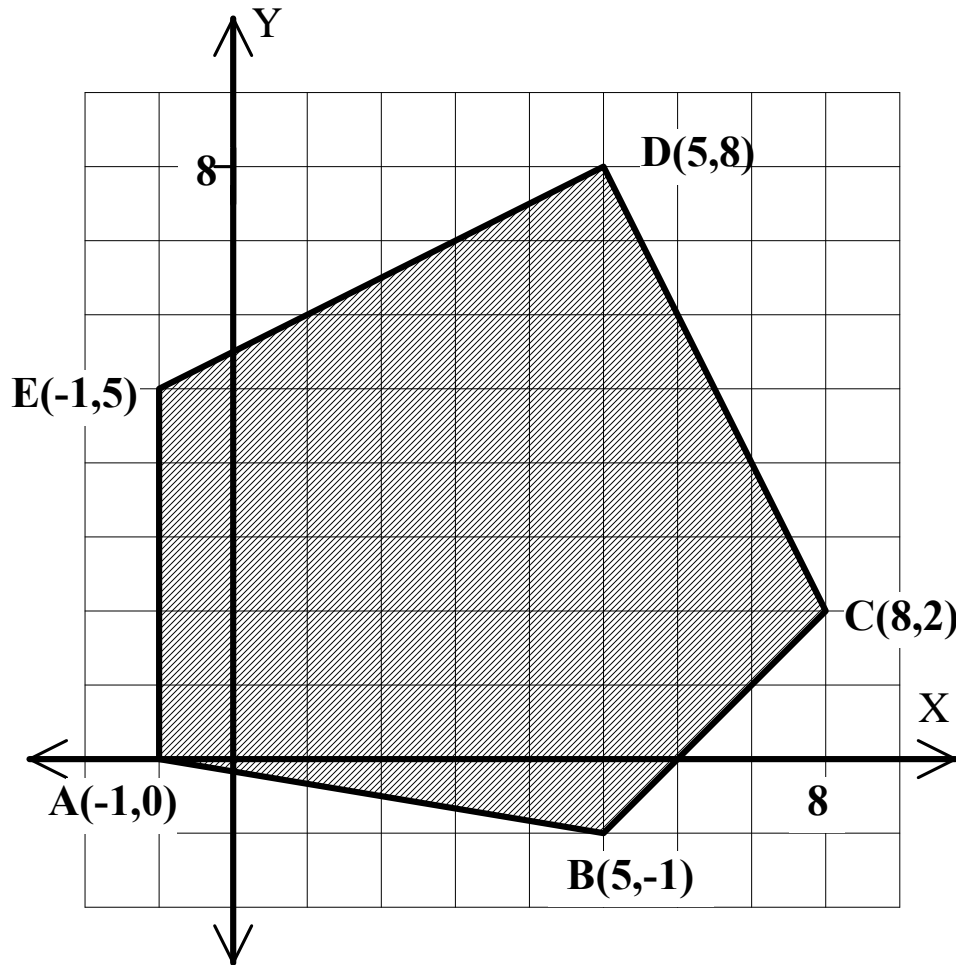
The **maximum** and the **minimum** values of T will occur at a vertex of the region.

2. $T = 6x + 2y$

$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

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General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

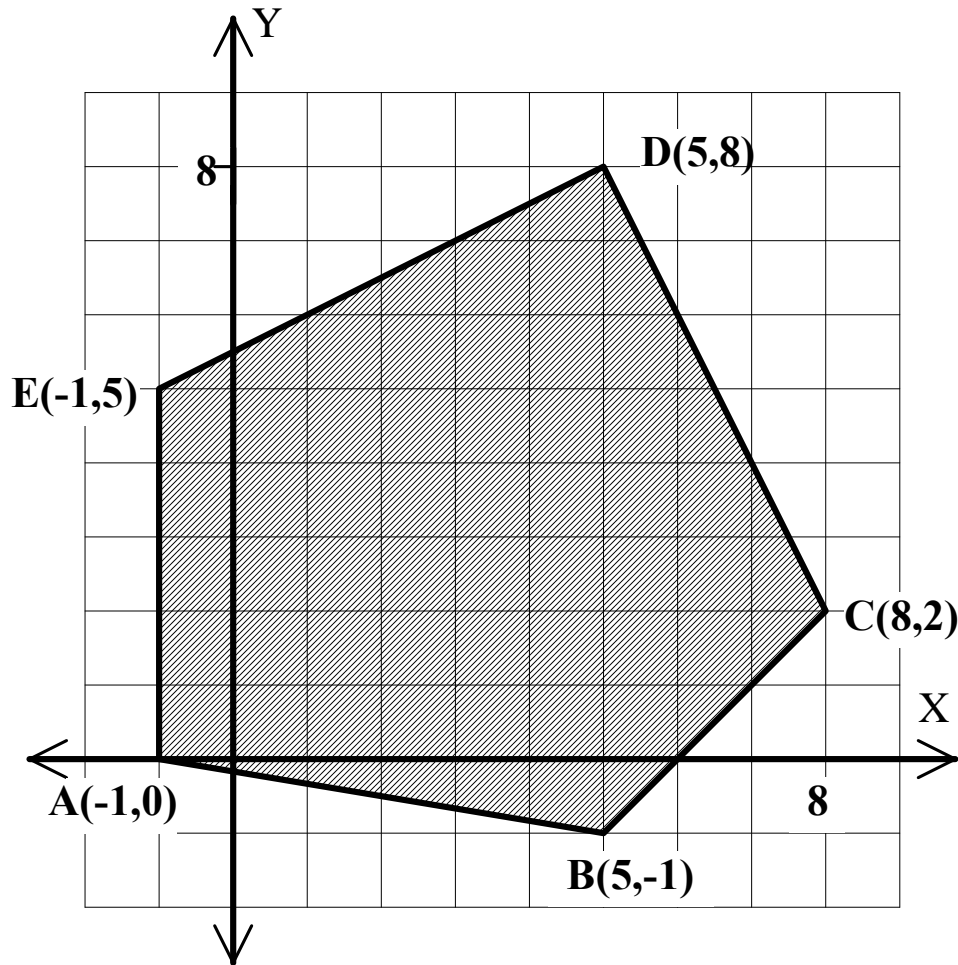
$$2. \quad T = 6x + 2y$$

$$T_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

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$$\text{At } A(-1,0) \implies T = -6 + 0 = \mathbf{-6}$$

General Algebra II CWS #1 Unit 5



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$$2. \quad T = 6x + 2y$$

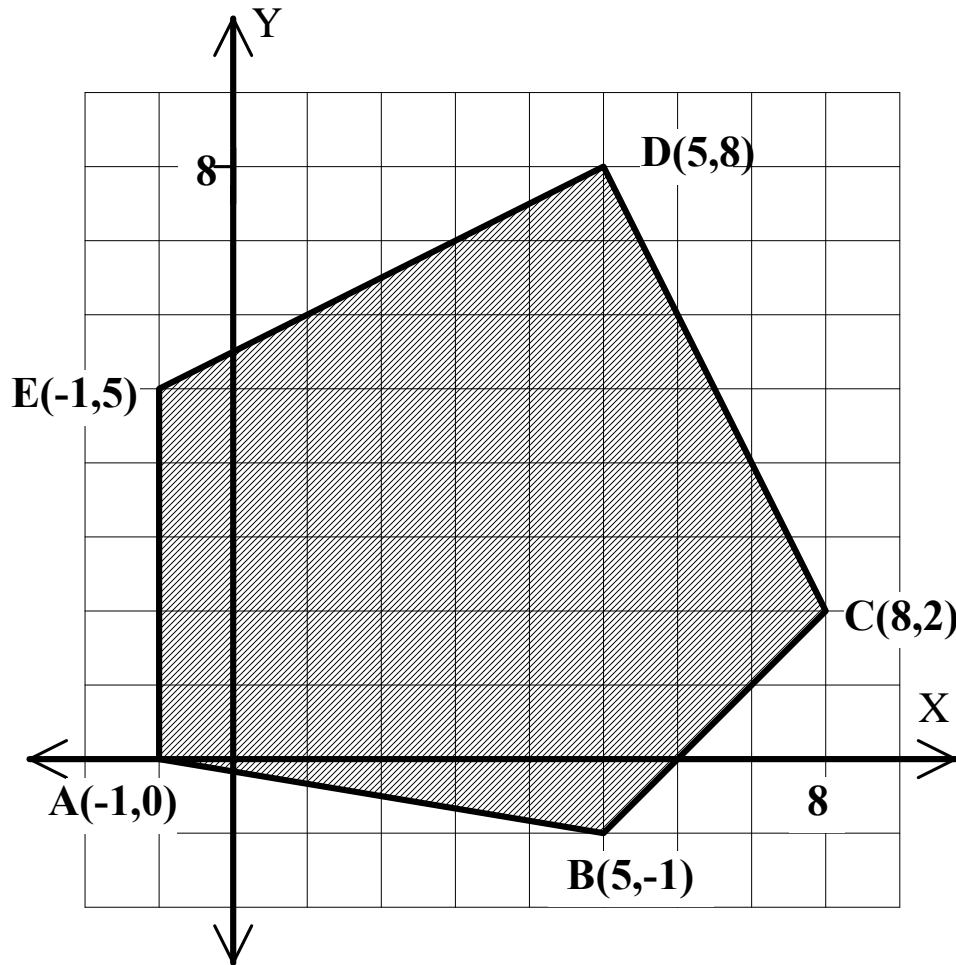
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$$\text{At } A(-1,0) \implies T = -6 + 0 = \mathbf{-6}$$

$$\text{At } B(5,-1) \implies T = 30 + (-2) = \mathbf{32}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$2. \quad T = 6x + 2y$$

$$T_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

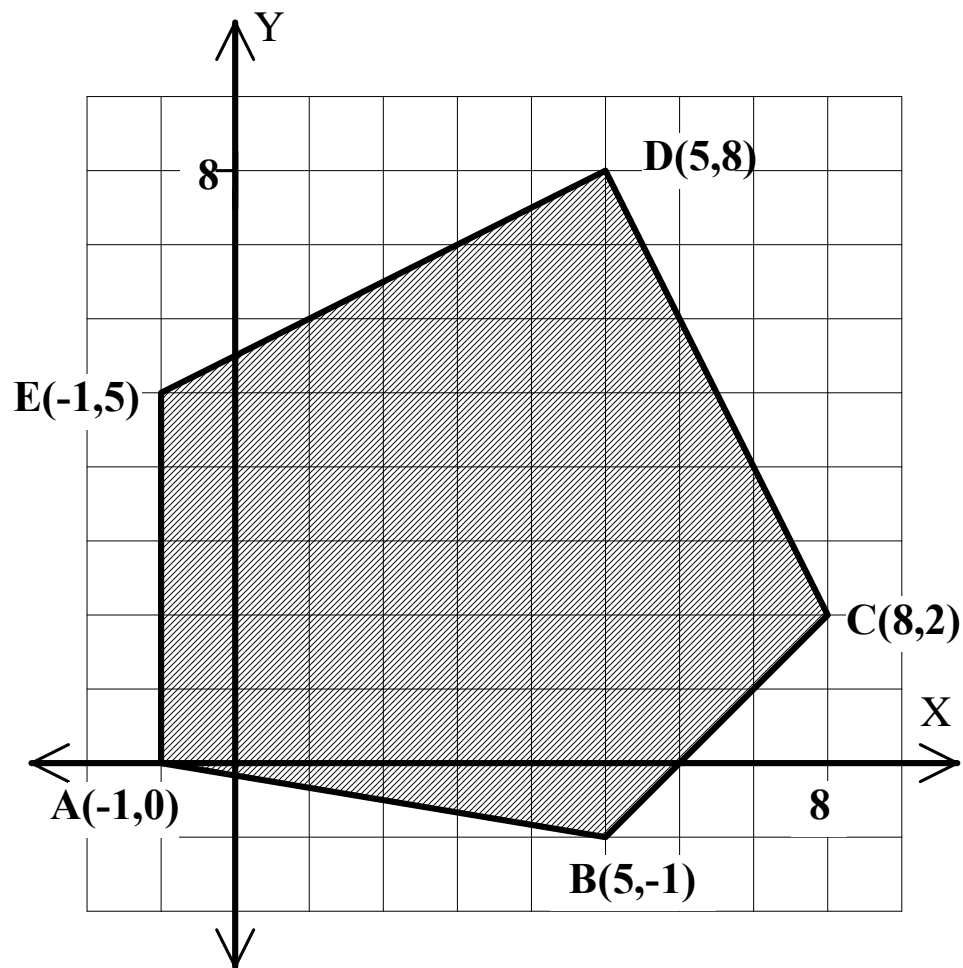
$$T_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } A(-1,0) \implies T = -6 + 0 = \mathbf{-6}$$

$$\text{At } B(5,-1) \implies T = 30 + (-2) = \mathbf{32}$$

$$\text{At } C(8,2) \implies T = 48 + 4 = \mathbf{44}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$2. \quad T = 6x + 2y$$

$$T_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

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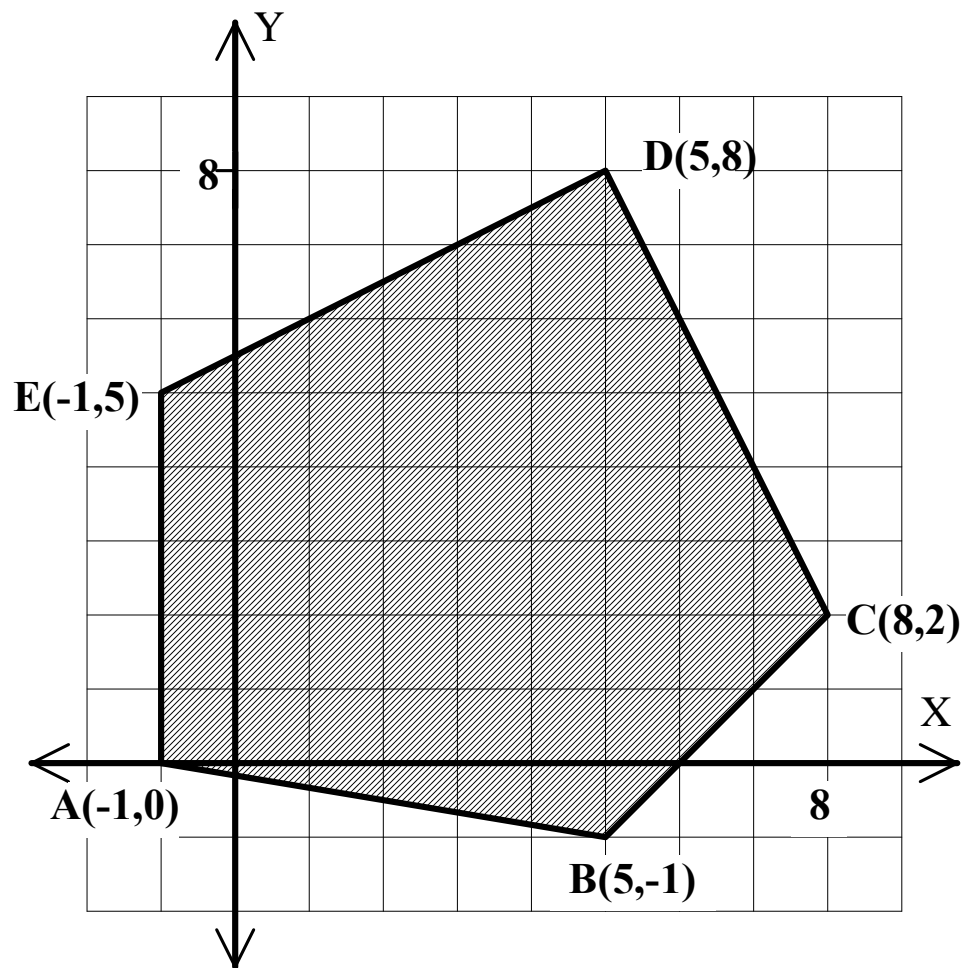
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$$\text{At } B(5,-1) \implies T = 30 + (-2) = \mathbf{32}$$

$$\text{At } C(8,2) \implies T = 48 + 4 = \mathbf{44}$$

$$\text{At } D(5,8) \implies T = 30 + 16 = \mathbf{46}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$2. \quad T = 6x + 2y$$

$$T_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

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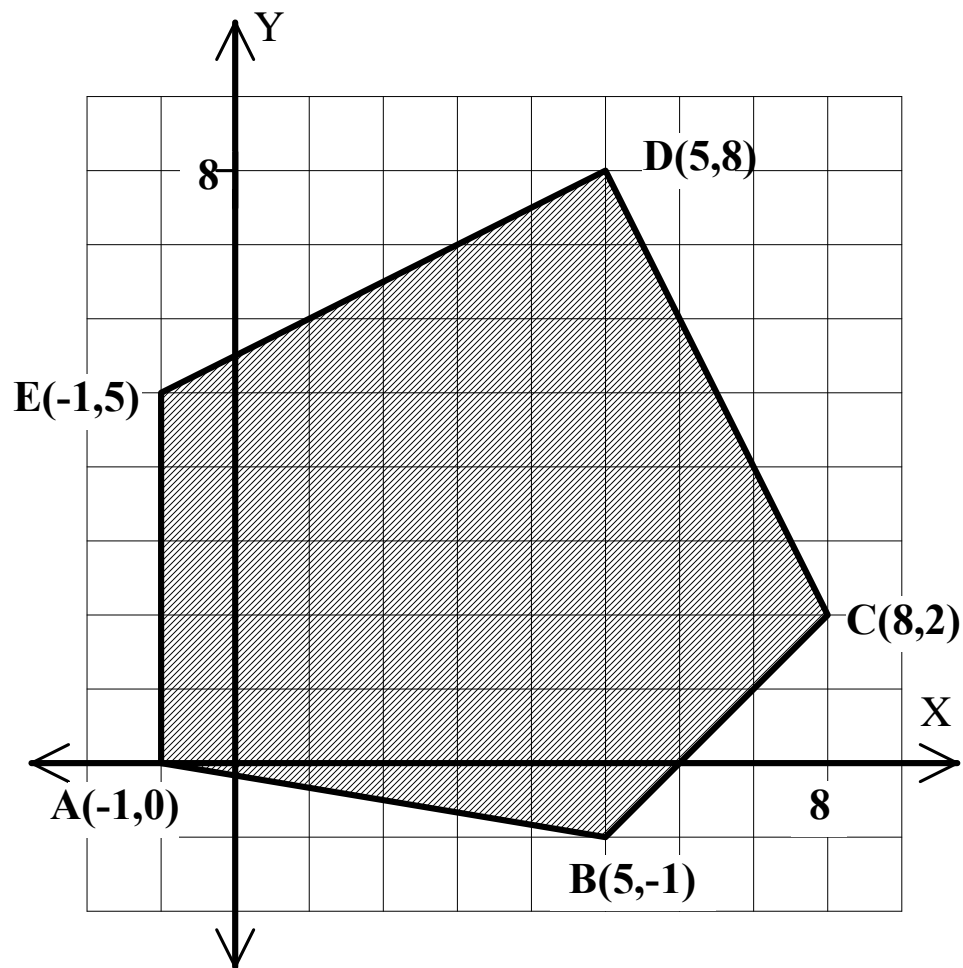
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$$\text{At } E(-1,5) \implies T = -6 + 10 = \mathbf{4}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$2. \quad T = 6x + 2y$$

$$T_{\max} = \underline{44} \quad \text{at} \quad \underline{(8,2)}$$

$$T_{\min} = \underline{\quad\quad\quad} \quad \text{at} \quad \underline{\quad\quad\quad}$$

$$\text{At } A(-1,0) \implies T = -6 + 0 = \mathbf{-6}$$

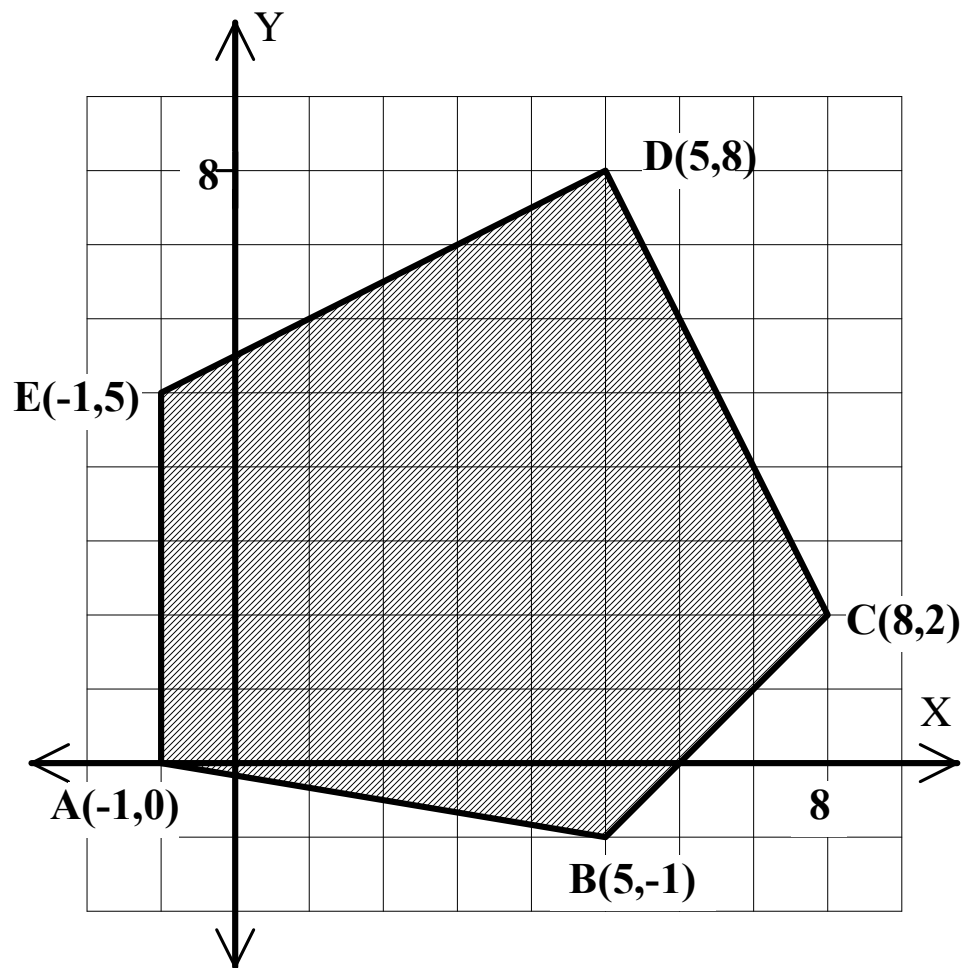
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$$\text{At } E(-1,5) \implies T = -6 + 10 = \mathbf{-16}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$2. \quad T = 6x + 2y$$

$$T_{\max} = \underline{44} \quad \text{at} \quad \underline{(8,2)}$$

$$T_{\min} = \underline{-16} \quad \text{at} \quad \underline{(-1,5)}$$

$$\text{At } A(-1,0) \implies T = -6 + 0 = \mathbf{-6}$$

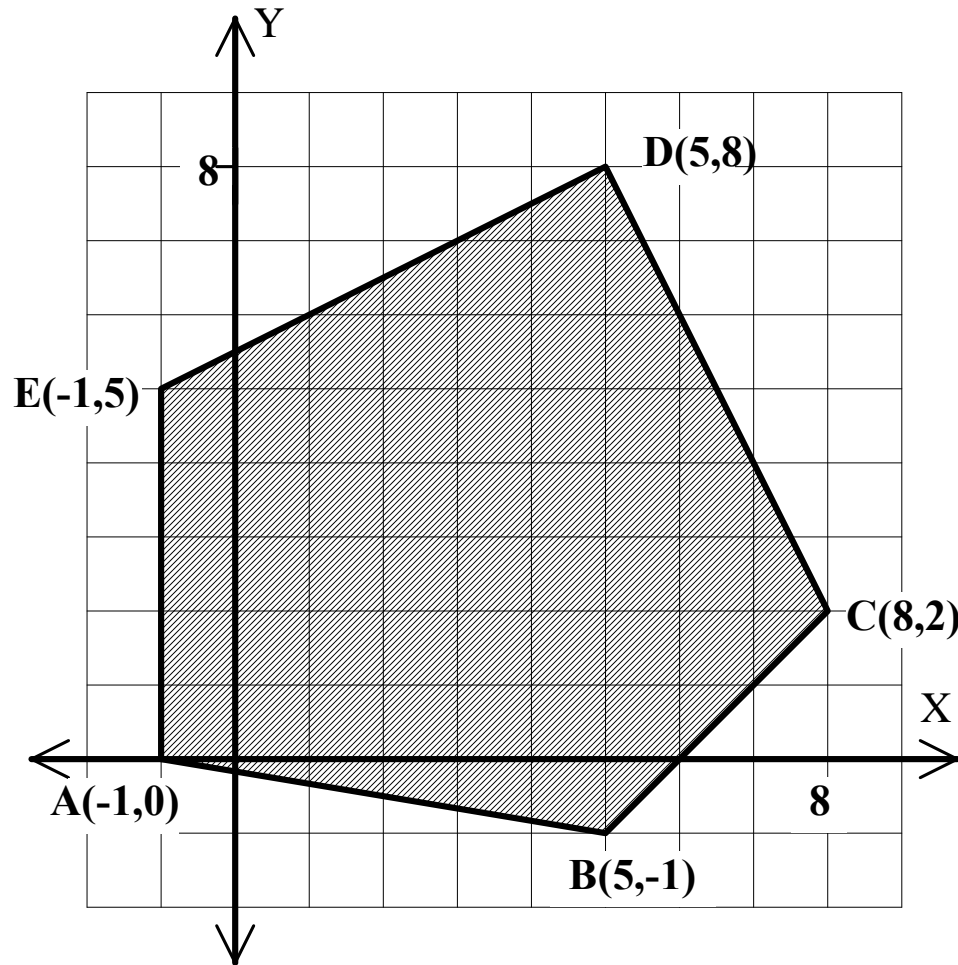
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General Algebra II CWS #1 Unit 5



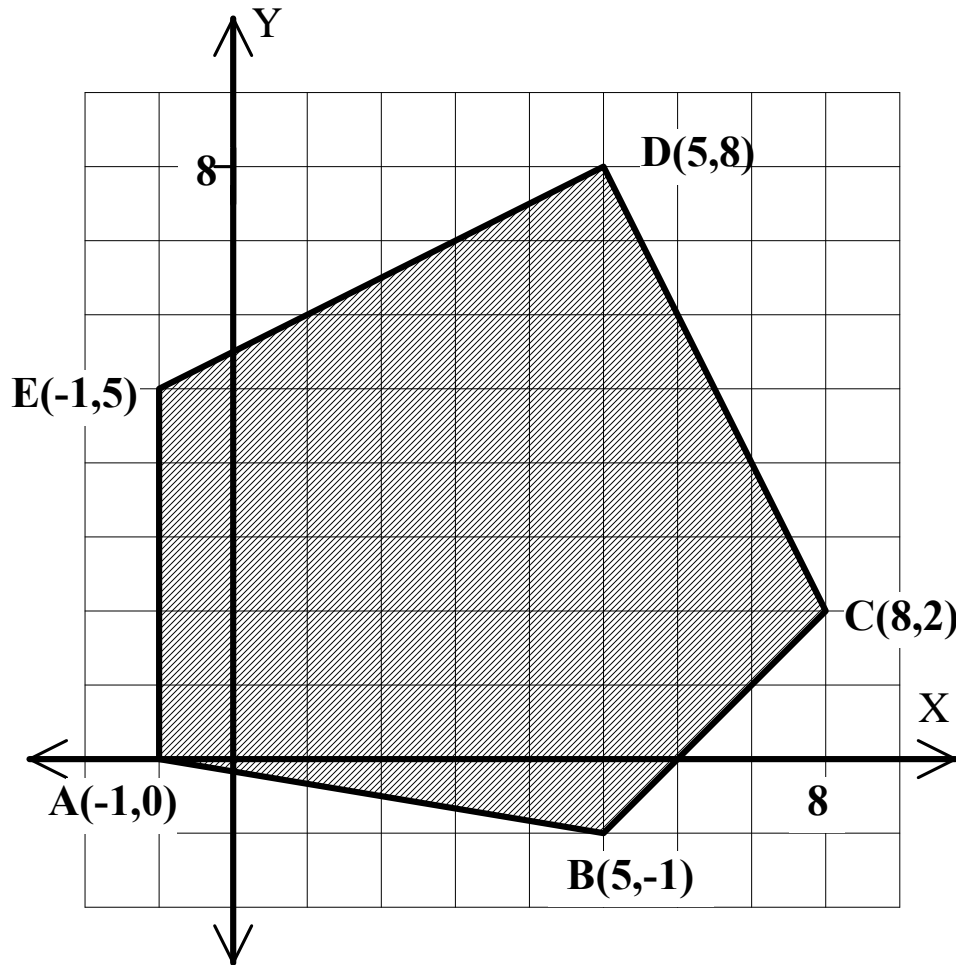
The **maximum** and the **minimum** values of T will occur at a vertex of the region.

3. $T = x + 3y$

$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

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General Algebra II CWS #1 Unit 5



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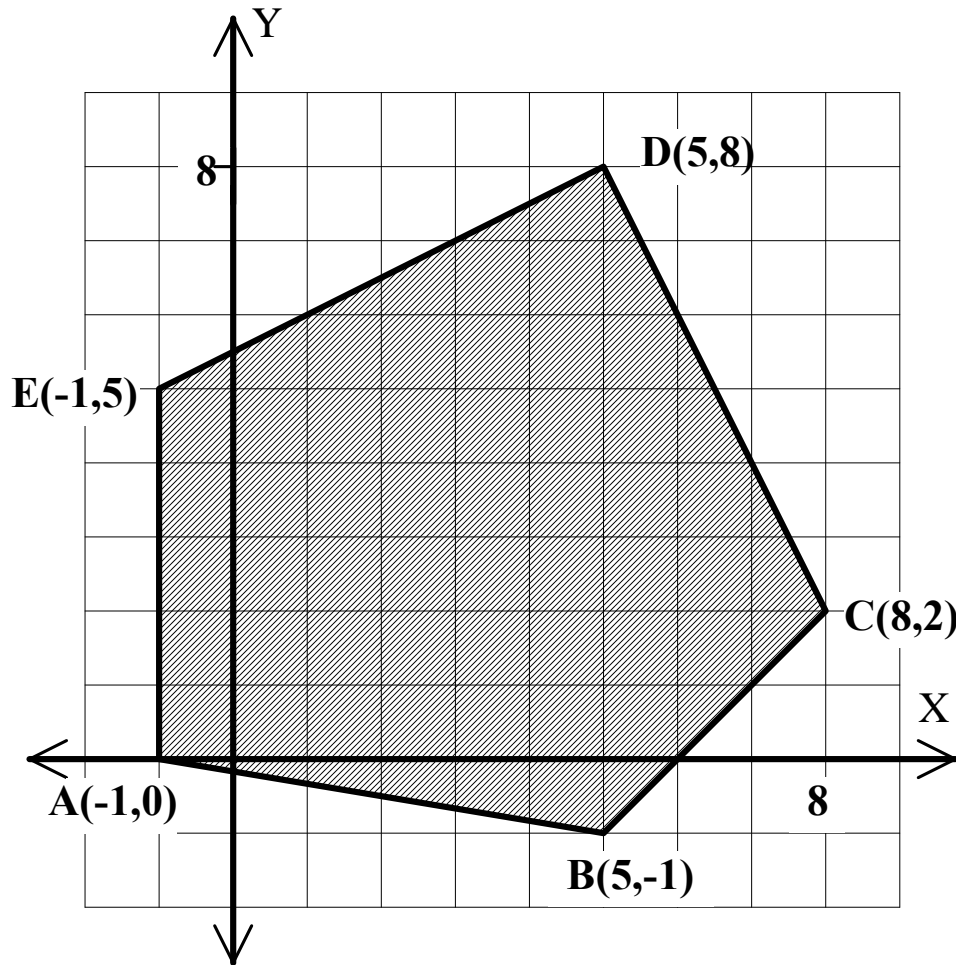
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General Algebra II CWS #1 Unit 5



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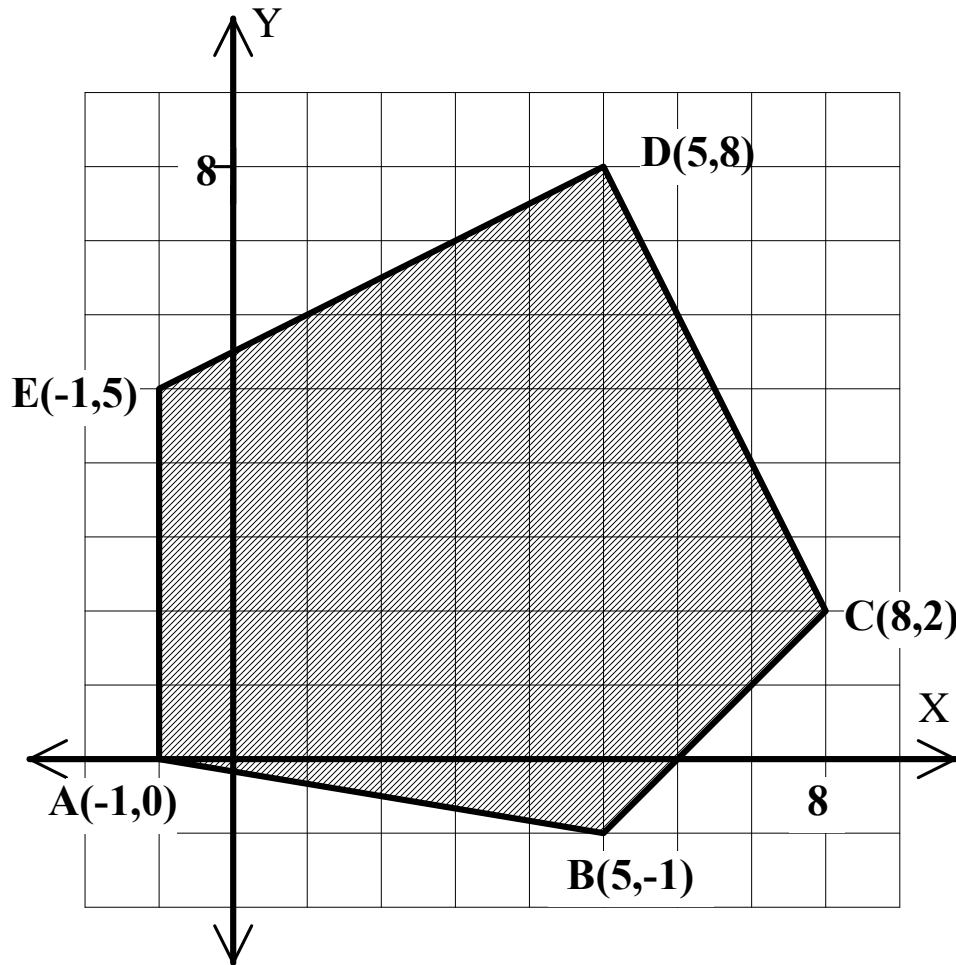
$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

$T_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

At $A(-1,0) \implies T = -1 + 0 = -1$

At $B(5,-1) \implies T = 5 + (-3) = 2$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

3. $T = x + 3y$

$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

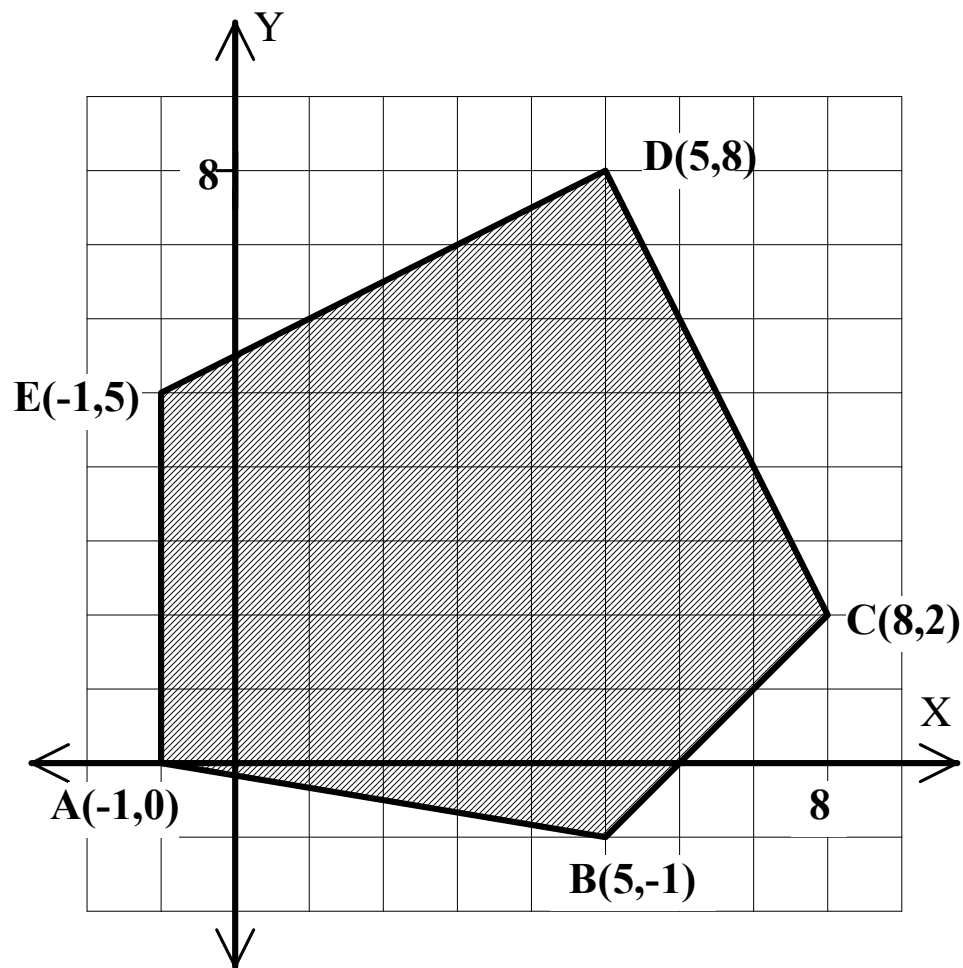
$T_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

At $A(-1,0) \implies T = -1 + 0 = -1$

At $B(5,-1) \implies T = 5 + (-3) = 2$

At $C(8,2) \implies T = 8 + 6 = 14$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

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$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

$T_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

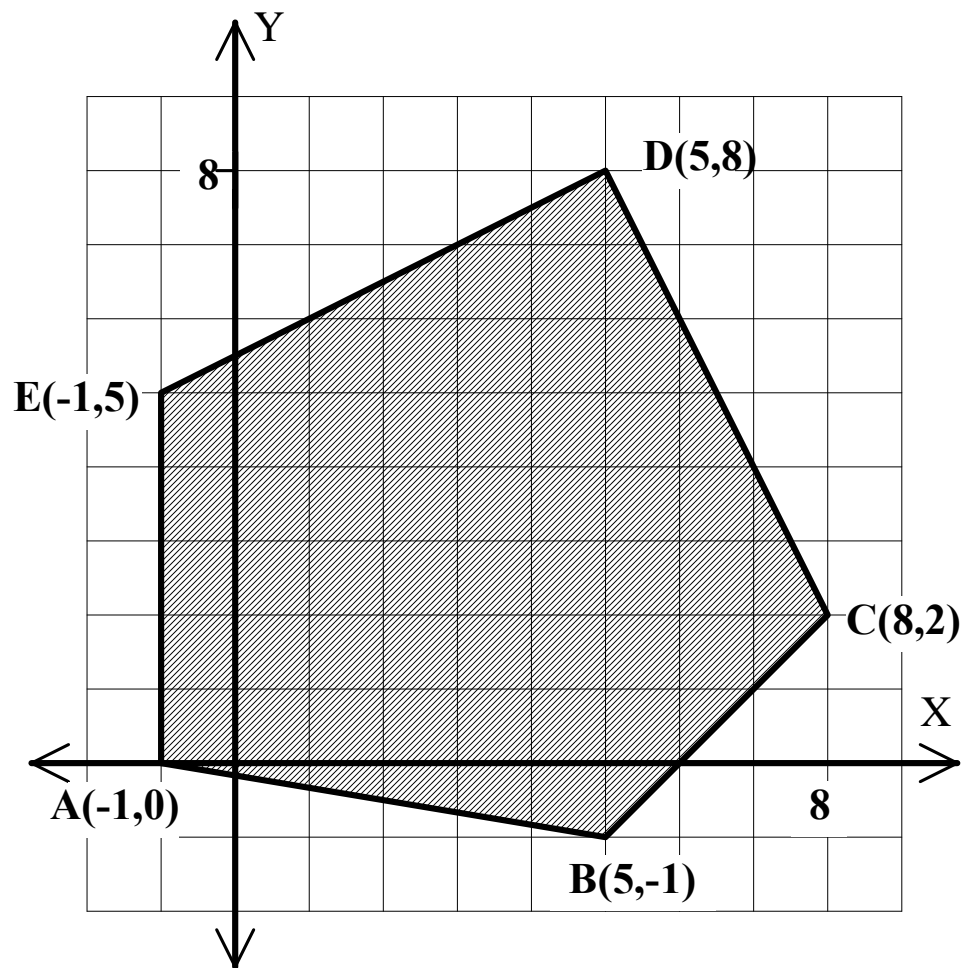
At A(-1,0) $\implies T = -1 + 0 = -1$

At B(5,-1) $\implies T = 5 + (-3) = 2$

At C(8,2) $\implies T = 8 + 6 = 14$

At D(5,8) $\implies T = 5 + 24 = 29$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

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$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

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At A(-1,0) $\implies T = -1 + 0 = -1$

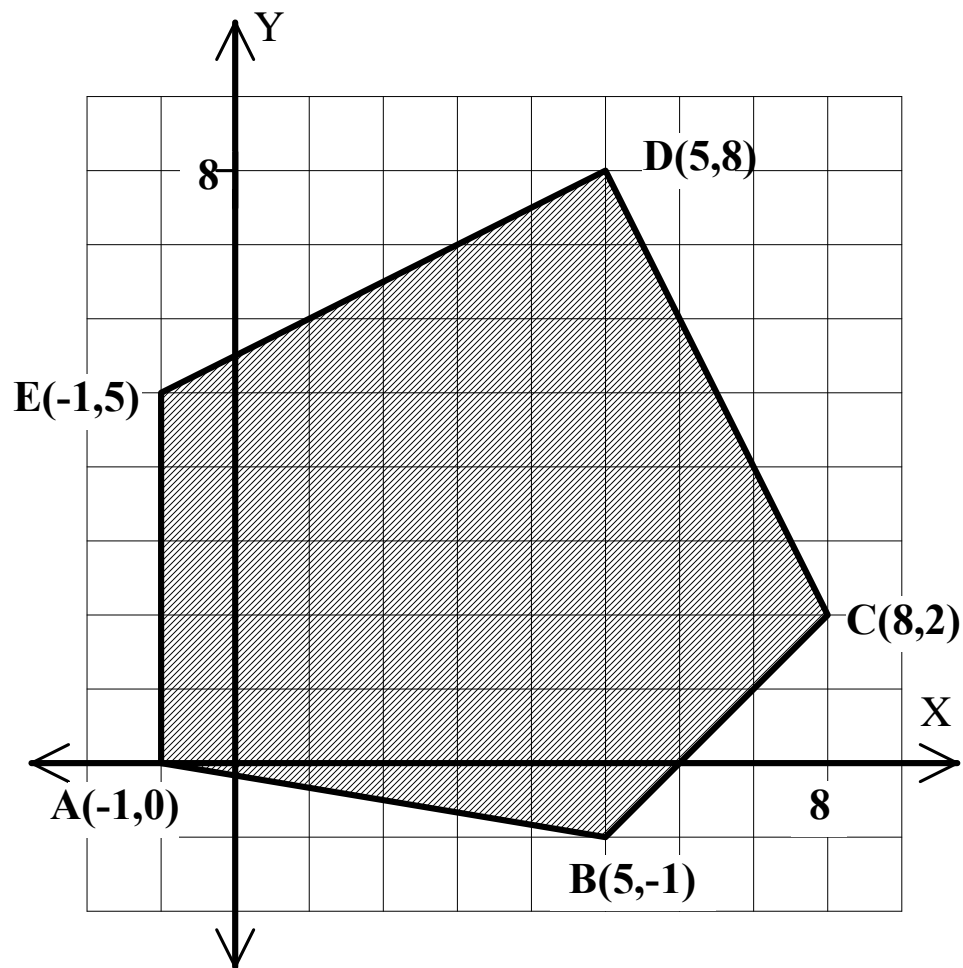
At B(5,-1) $\implies T = 5 + (-3) = 2$

At C(8,2) $\implies T = 8 + 6 = 14$

At D(5,8) $\implies T = 5 + 24 = 29$

At E(-1,5) $\implies T = -1 + 15 = 14$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$3. \quad T = x + 3y$$

$$T_{\max} = \underline{8} \quad \text{at} \quad \underline{(5,-1)}$$

$$T_{\min} = \underline{\quad} \quad \text{at} \quad \underline{\quad}$$

$$\text{At } A(-1,0) \implies T = -1 + 0 = -1$$

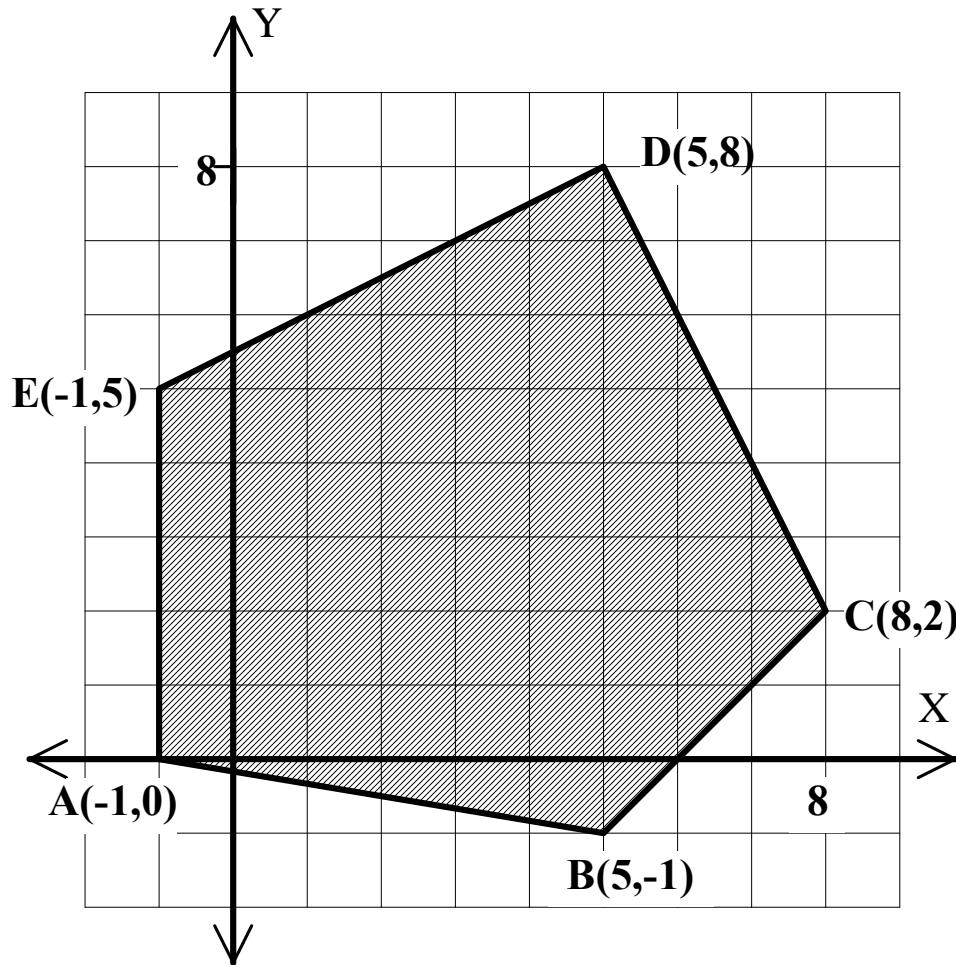
$$\text{At } B(5,-1) \implies T = 5 + (-3) = 2$$

$$\text{At } C(8,2) \implies T = 8 + 6 = 14$$

$$\text{At } D(5,8) \implies T = 5 + 24 = 29$$

$$\text{At } E(-1,5) \implies T = -1 + 15 = 14$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$3. \quad T = x + 3y$$

$$T_{\max} = \underline{\quad 8 \quad} \quad \text{at} \quad \underline{\quad (5,-1) \quad}$$

$$T_{\min} = \underline{\quad -19 \quad} \quad \text{at} \quad \underline{\quad (5,8) \quad}$$

$$\text{At } A(-1,0) \implies T = -1 + 0 = -1$$

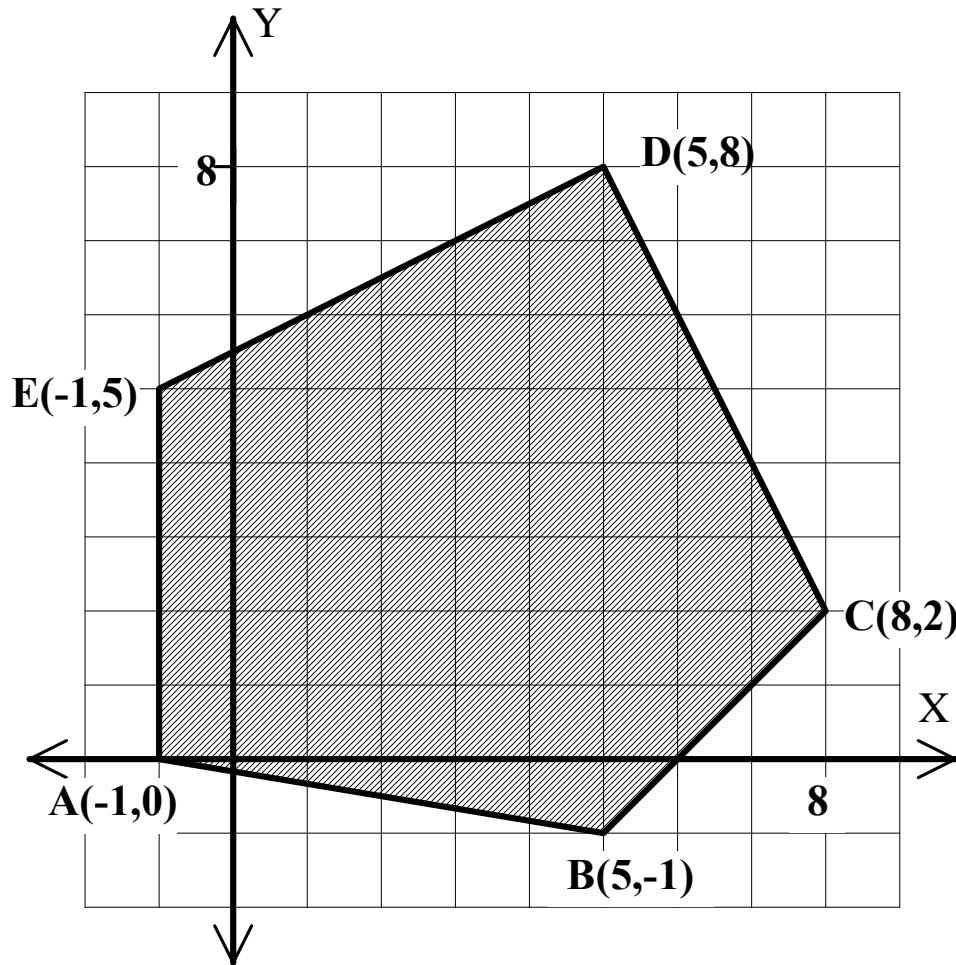
$$\text{At } B(5,-1) \implies T = 5 + (-3) = 2$$

$$\text{At } C(8,2) \implies T = 8 + 6 = 14$$

$$\text{At } D(5,8) \implies T = 5 + 24 = 29$$

$$\text{At } E(-1,5) \implies T = -1 + 15 = 14$$

General Algebra II CWS #1 Unit 5



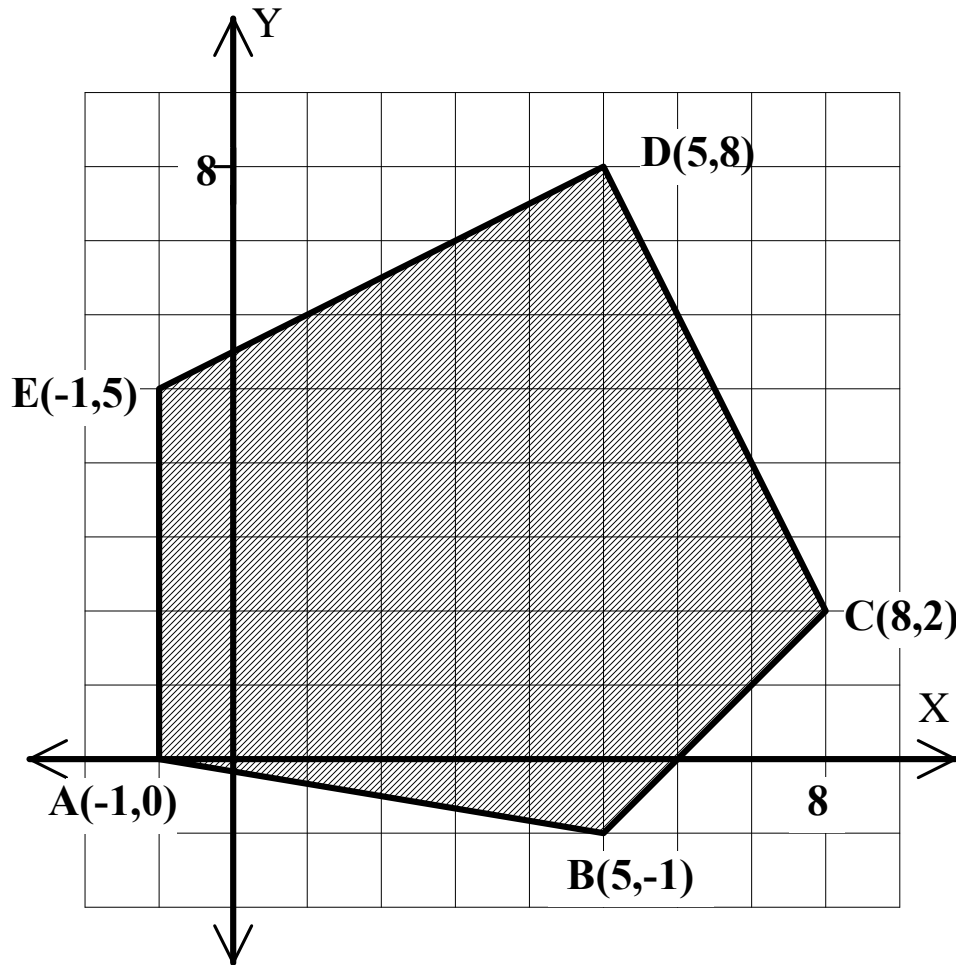
The **maximum** and the **minimum** values of T will occur at a vertex of the region.

4. $T = x + 2y$

$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

$T_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

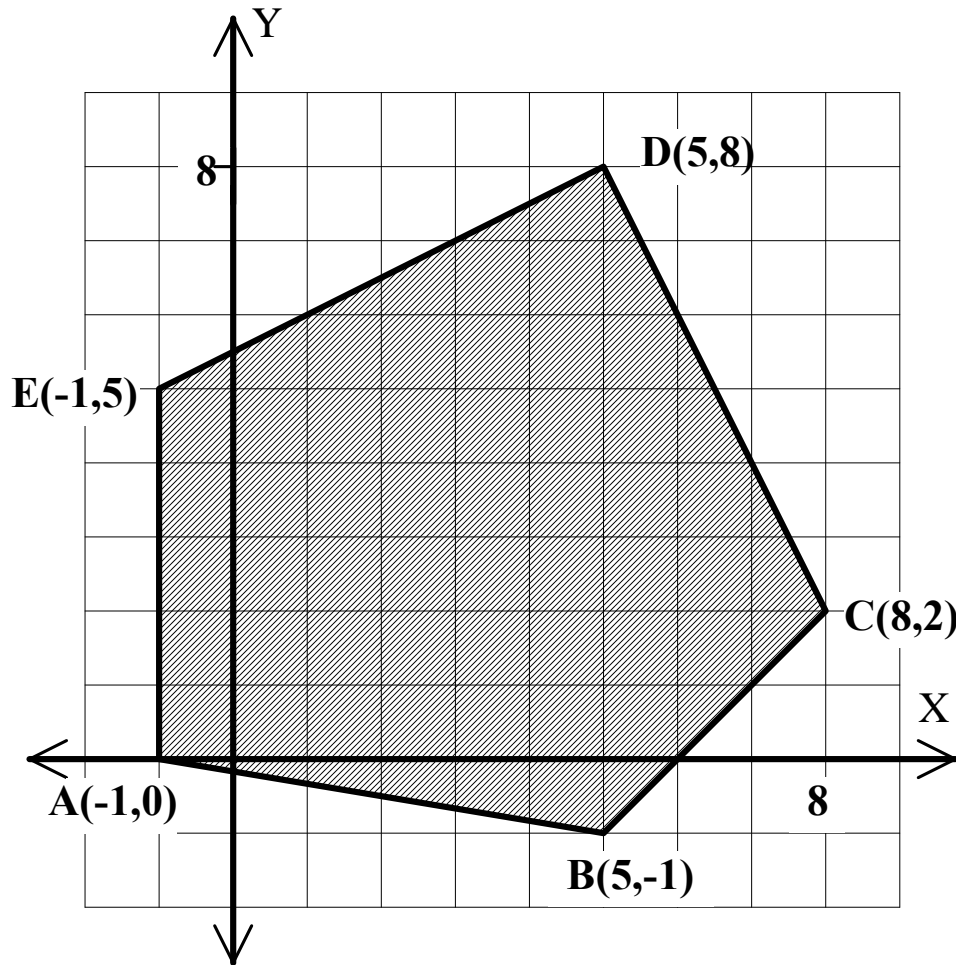
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$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

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General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

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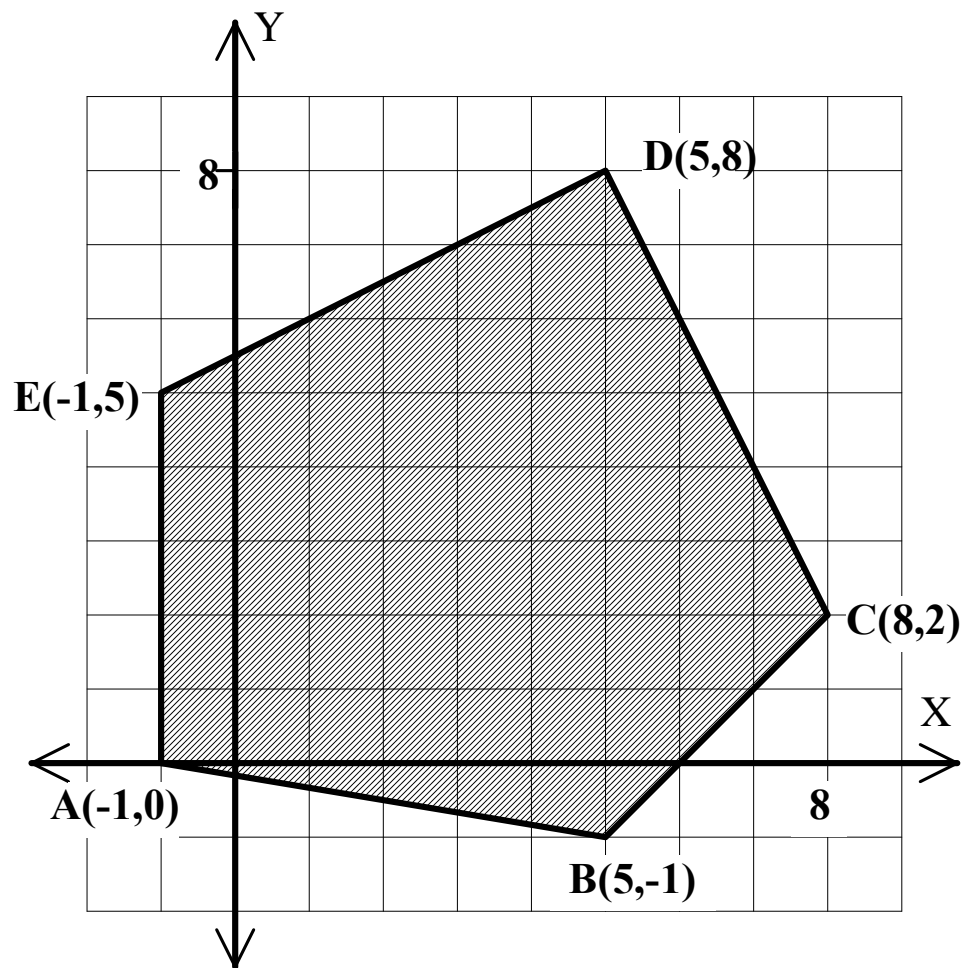
$T_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

$T_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

At A(-1,0) $\implies T = -1 + 0 = -1$

At B(5,-1) $\implies T = 5 + -2 = 3$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$4. \quad T = x + 2y$$

$$T_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

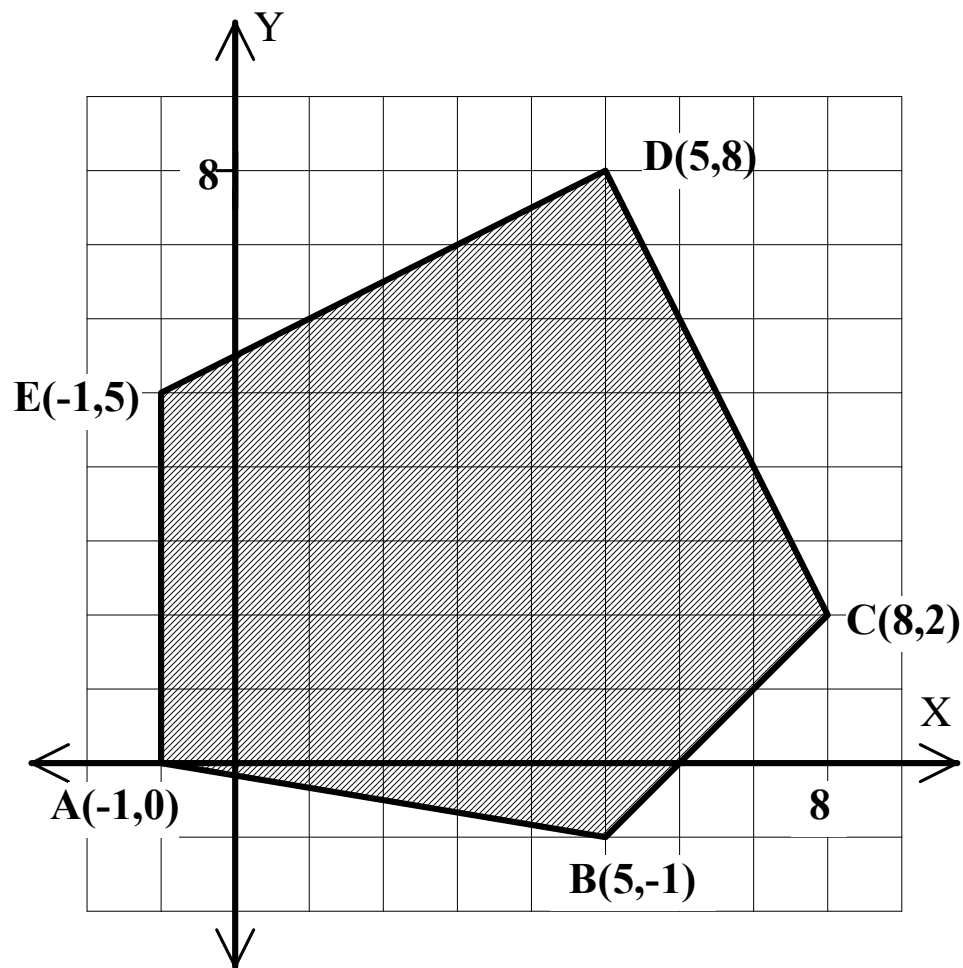
$$T_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } A(-1,0) \quad \Rightarrow \quad T = -1 + 0 = \mathbf{-1}$$

$$\text{At } B(5,-1) \quad \Rightarrow \quad T = 5 + -2 = \mathbf{3}$$

$$\text{At } C(8,2) \quad \Rightarrow \quad T = 8 + 4 = \mathbf{12}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$4. \quad T = x + 2y$$

$$T_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

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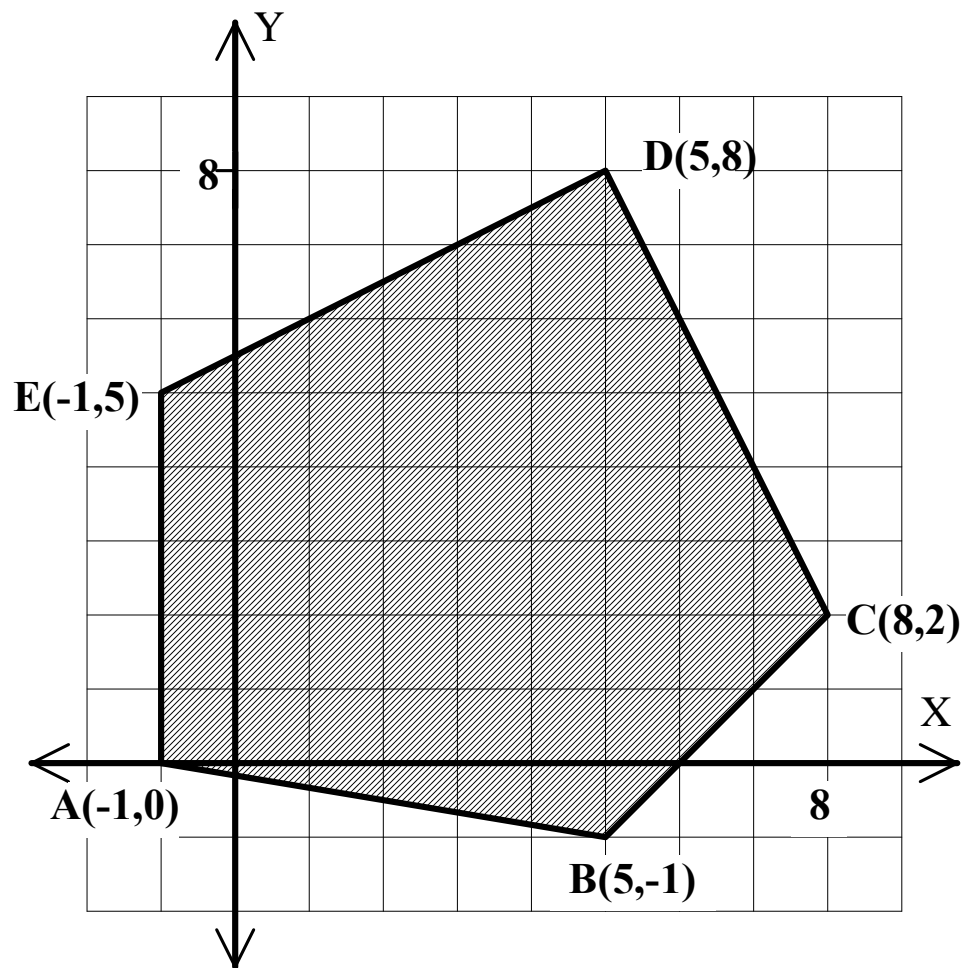
$$\text{At } A(-1,0) \quad \Rightarrow \quad T = -1 + 0 = \mathbf{-1}$$

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$$\text{At } C(8,2) \quad \Rightarrow \quad T = 8 + 4 = \mathbf{12}$$

$$\text{At } D(5,8) \quad \Rightarrow \quad T = 5 + 16 = \mathbf{21}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$4. \quad T = x + 2y$$

$$T_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$T_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } A(-1,0) \quad \Rightarrow \quad T = -1 + 0 = \mathbf{-1}$$

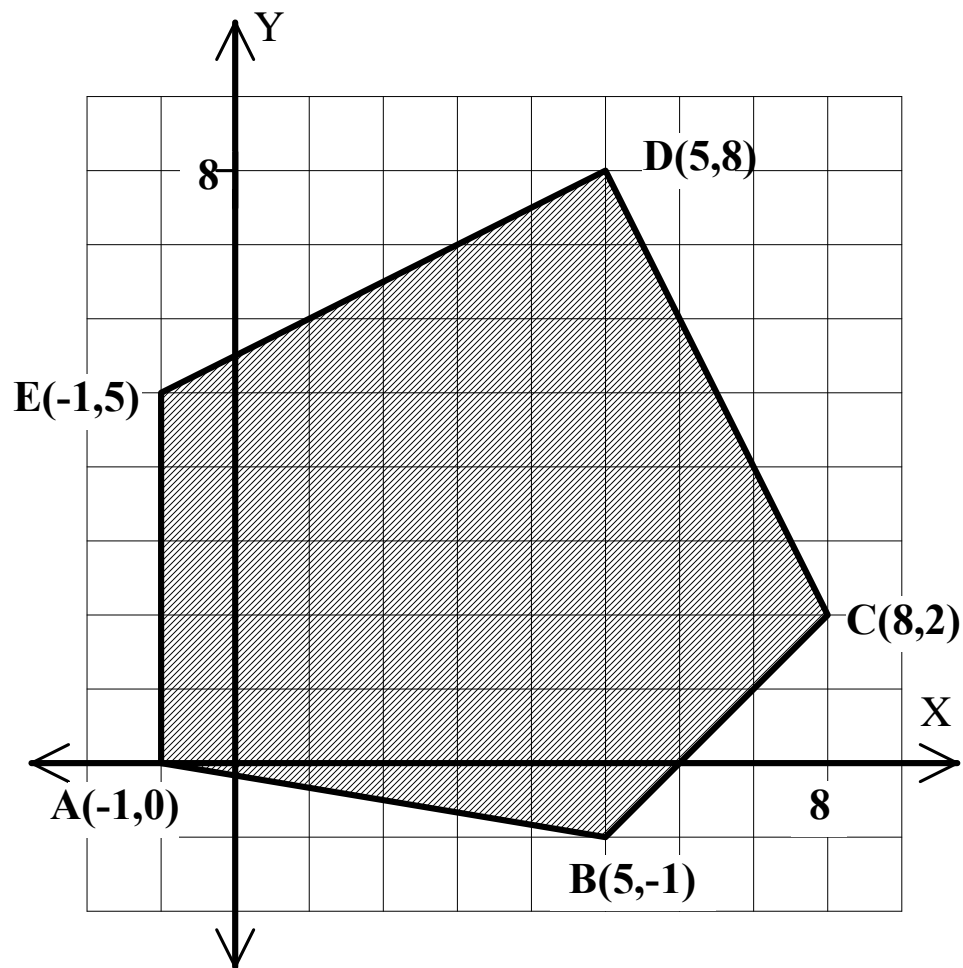
$$\text{At } B(5,-1) \quad \Rightarrow \quad T = 5 + -2 = \mathbf{3}$$

$$\text{At } C(8,2) \quad \Rightarrow \quad T = 8 + 4 = \mathbf{12}$$

$$\text{At } D(5,8) \quad \Rightarrow \quad T = 5 + 16 = \mathbf{21}$$

$$\text{At } E(-1,5) \quad \Rightarrow \quad T = -1 + 10 = \mathbf{9}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$4. \quad T = x + 2y$$

$$T_{\max} = \underline{21} \quad \text{at} \quad \underline{(5,8)}$$

$$T_{\min} = \underline{\quad} \quad \text{at} \quad \underline{\quad}$$

$$\text{At } A(-1,0) \implies T = -1 + 0 = \mathbf{-1}$$

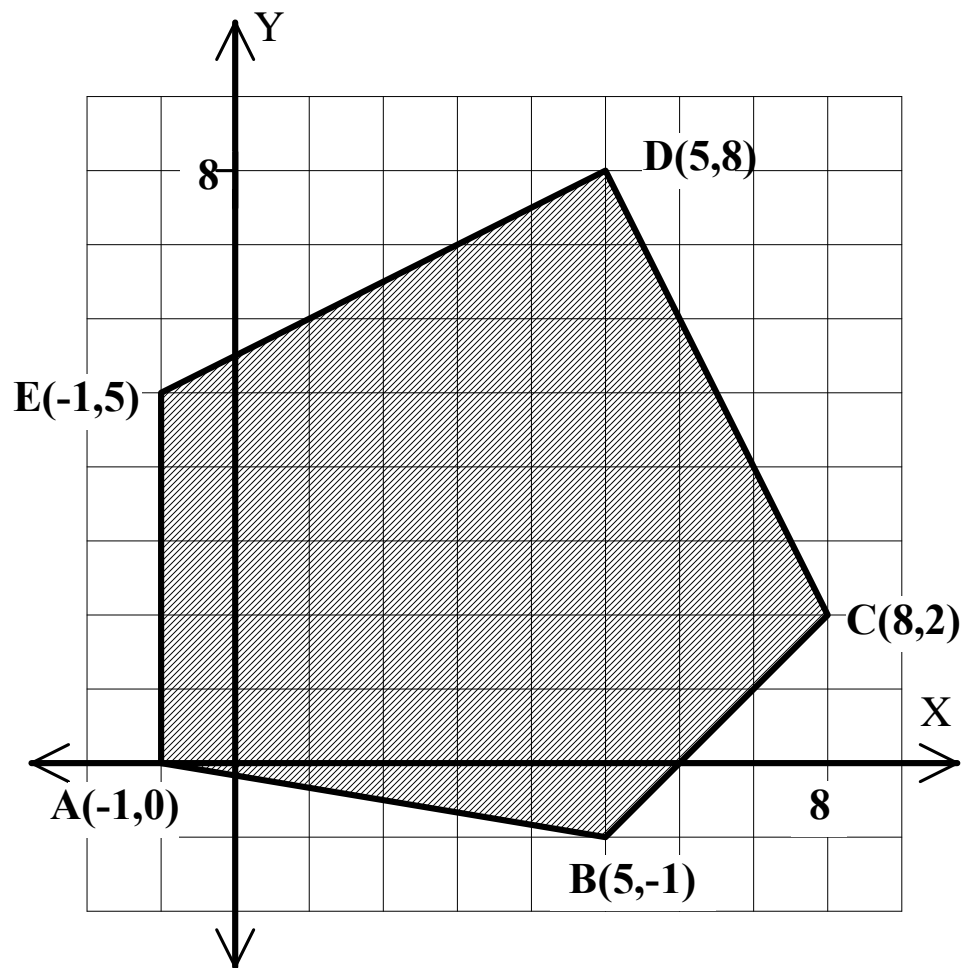
$$\text{At } B(5,-1) \implies T = 5 + -2 = \mathbf{3}$$

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General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of T will occur at a vertex of the region.

$$4. \quad T = x + 2y$$

$$T_{\max} = \underline{21} \quad \text{at} \quad \underline{(5,8)}$$

$$T_{\min} = \underline{-1} \quad \text{at} \quad \underline{(-1,0)}$$

$$\text{At } A(-1,0) \implies T = -1 + 0 = -1$$

$$\text{At } B(5,-1) \implies T = 5 + -2 = 3$$

$$\text{At } C(8,2) \implies T = 8 + 4 = 12$$

$$\text{At } D(5,8) \implies T = 5 + 16 = 21$$

$$\text{At } E(-1,5) \implies T = -1 + 10 = 9$$

General Algebra II CWS #1 Unit 5

Questions 5-8

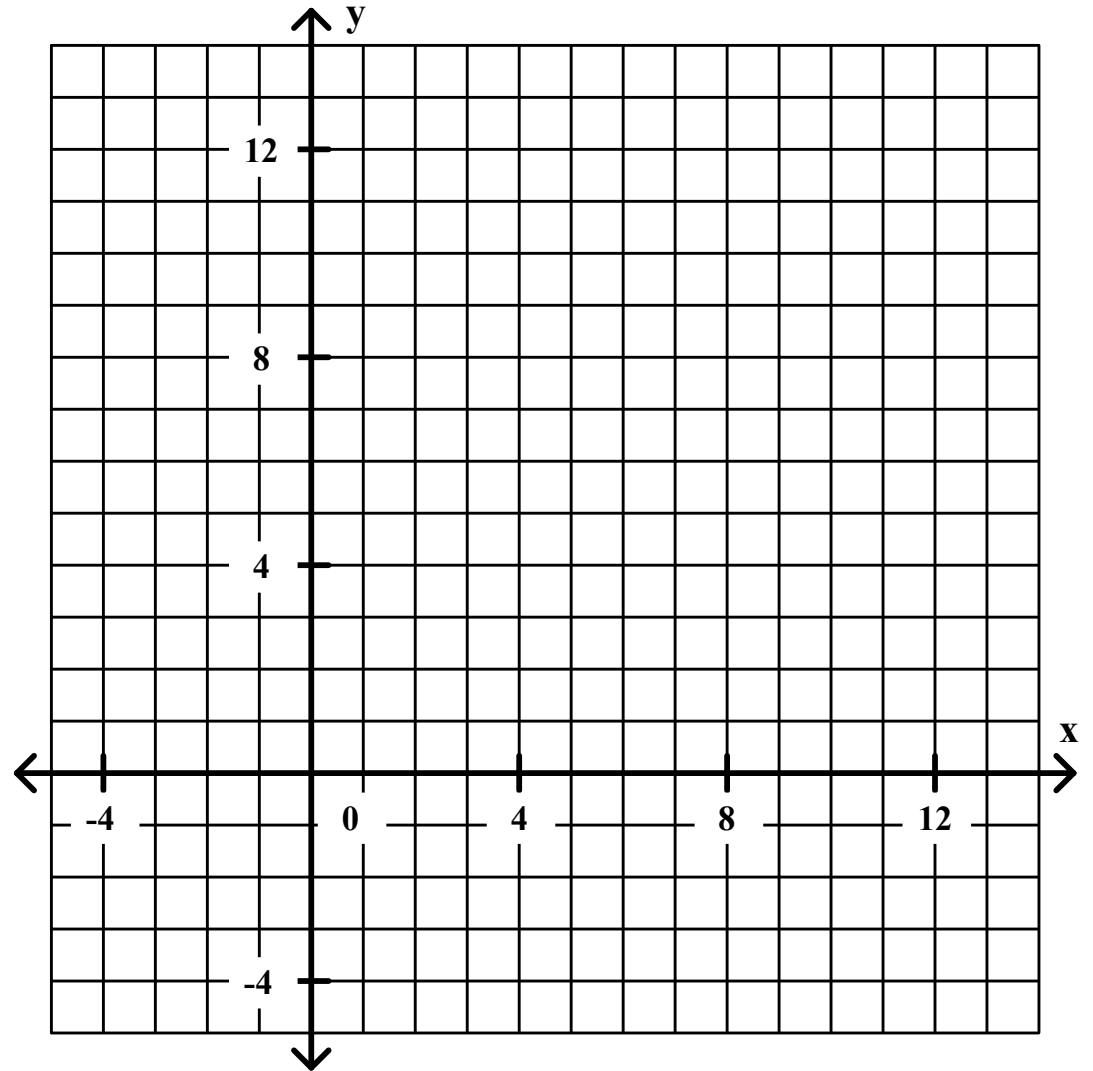
$$x + 3 \geq 0$$

$$x + y \geq 0$$

$$2x - 3y \leq 15$$

$$2x + 3y \leq 36$$

$$x - 3y \geq -27$$



General Algebra II CWS #1 Unit 5

Questions 5-8

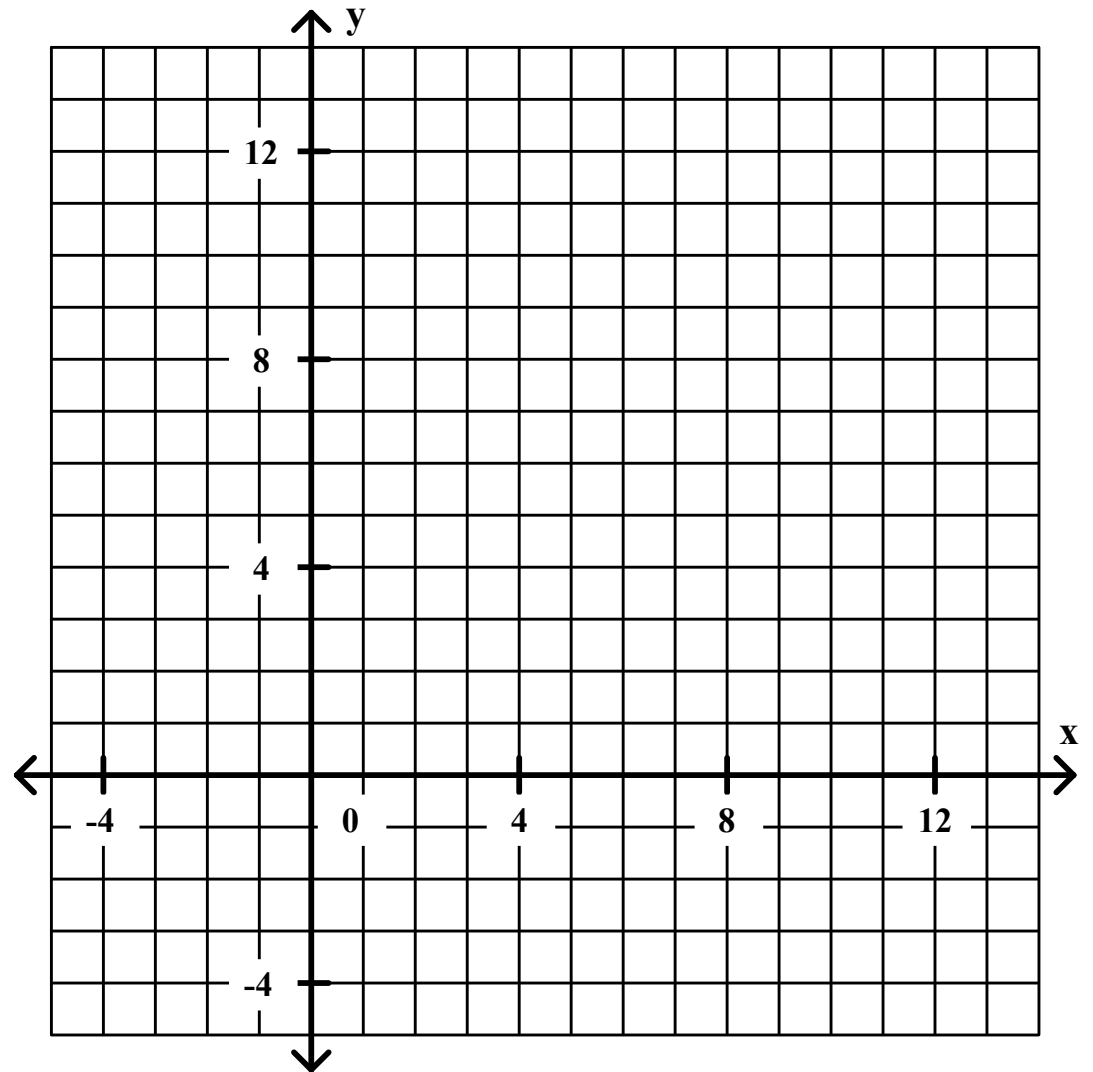
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General Algebra II CWS #1 Unit 5

Questions 5-8

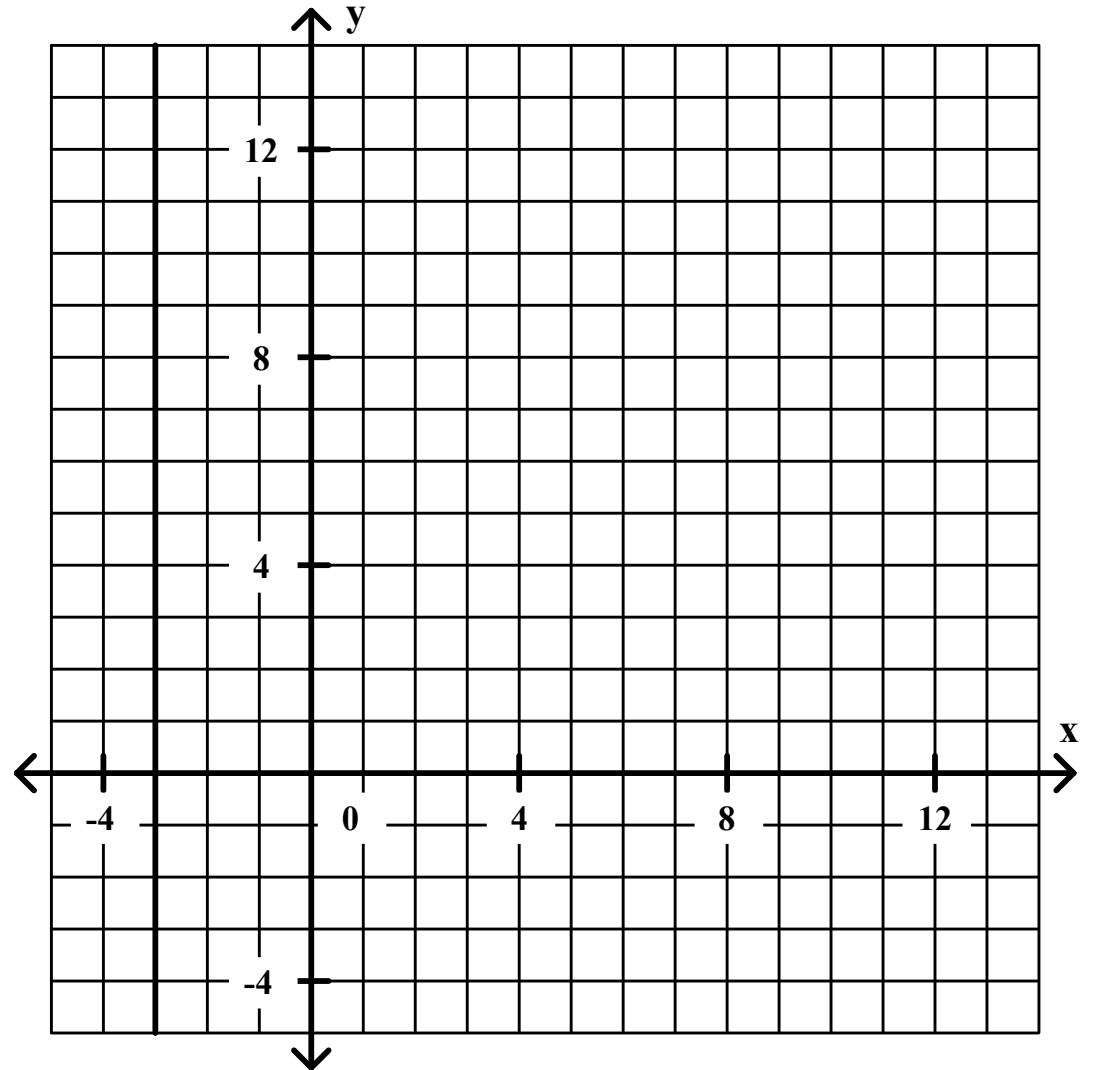
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General Algebra II CWS #1 Unit 5

Questions 5-8

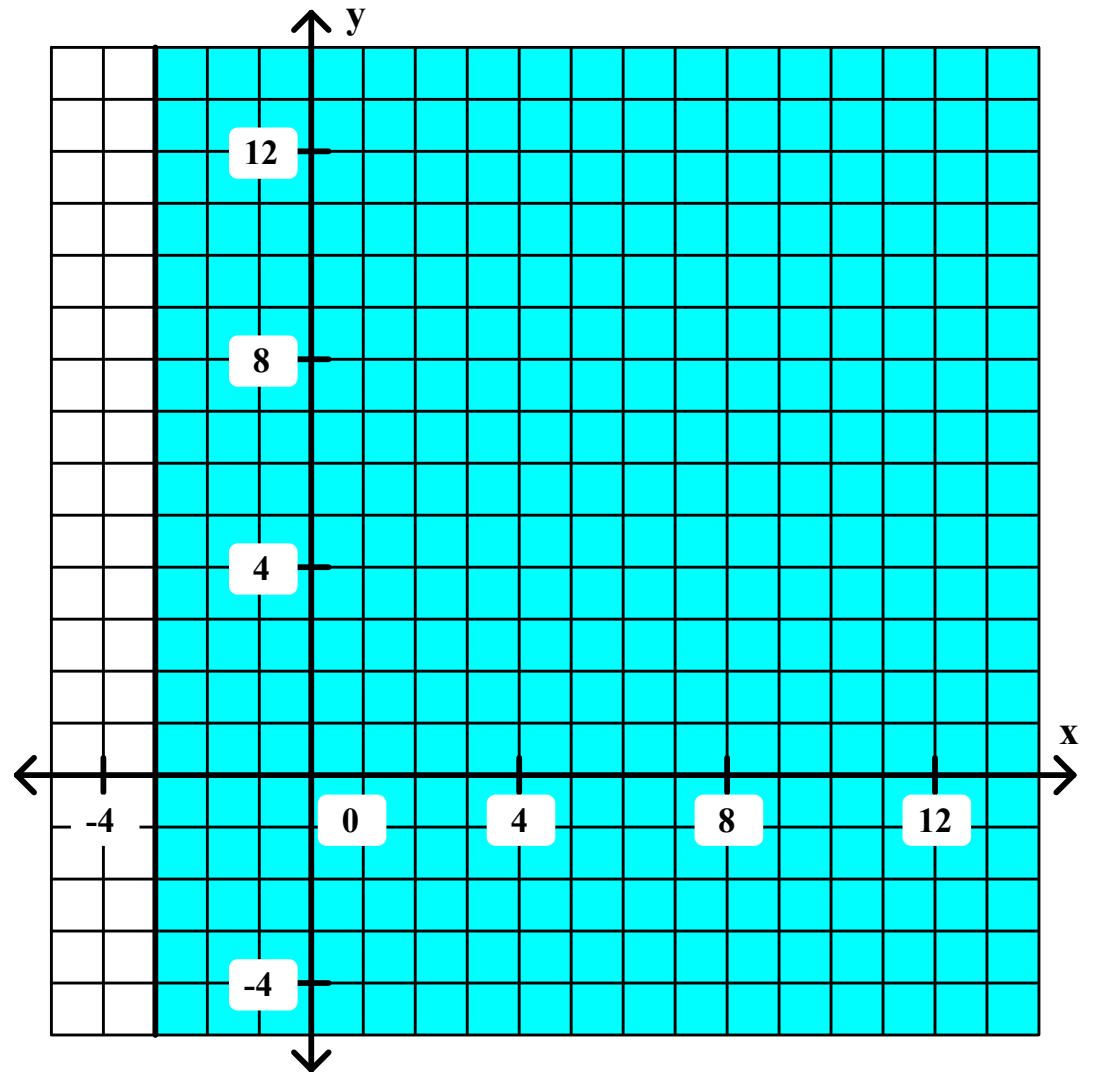
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General Algebra II CWS #1 Unit 5

Questions 5-8

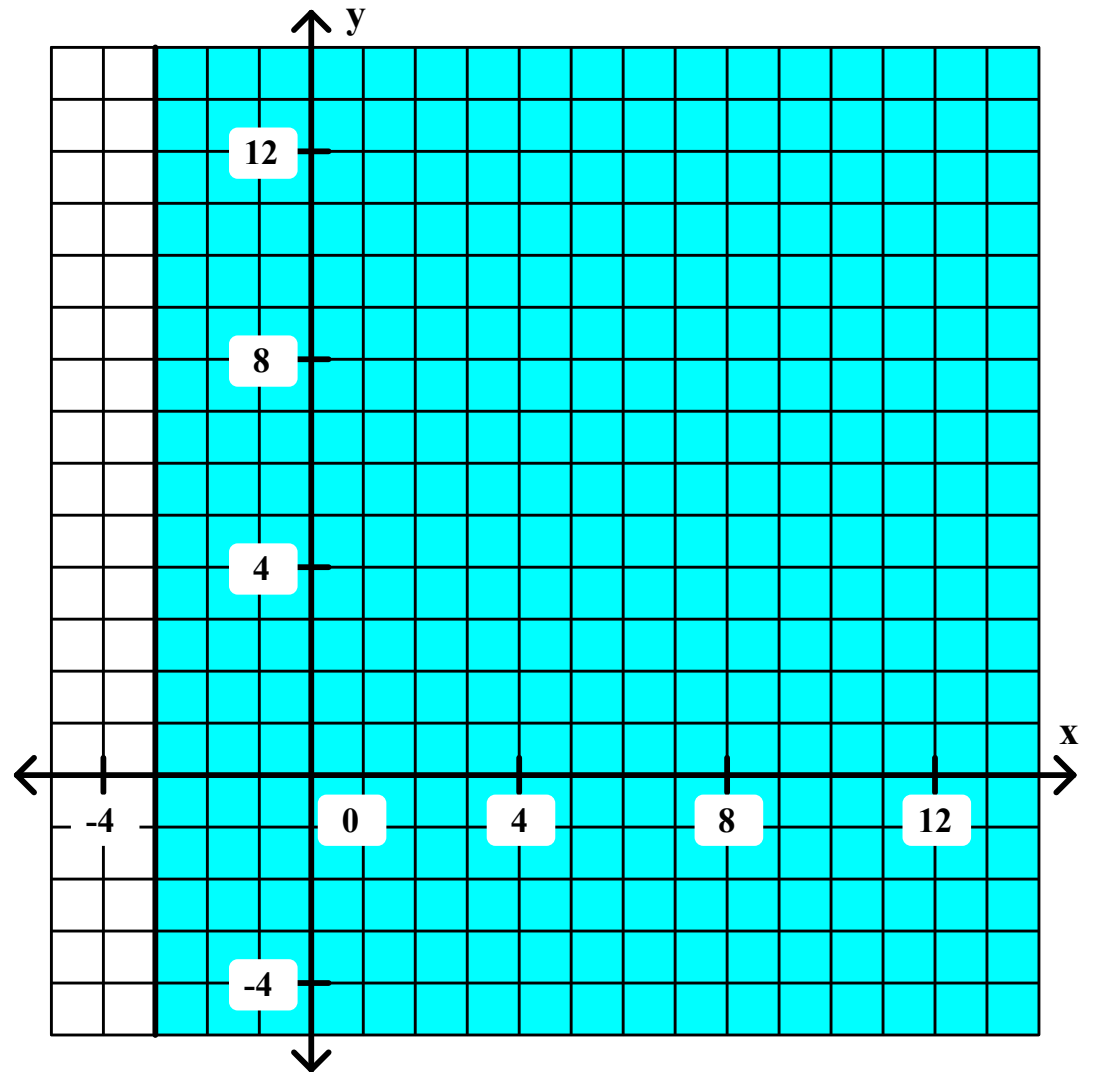
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General Algebra II CWS #1 Unit 5

Questions 5-8

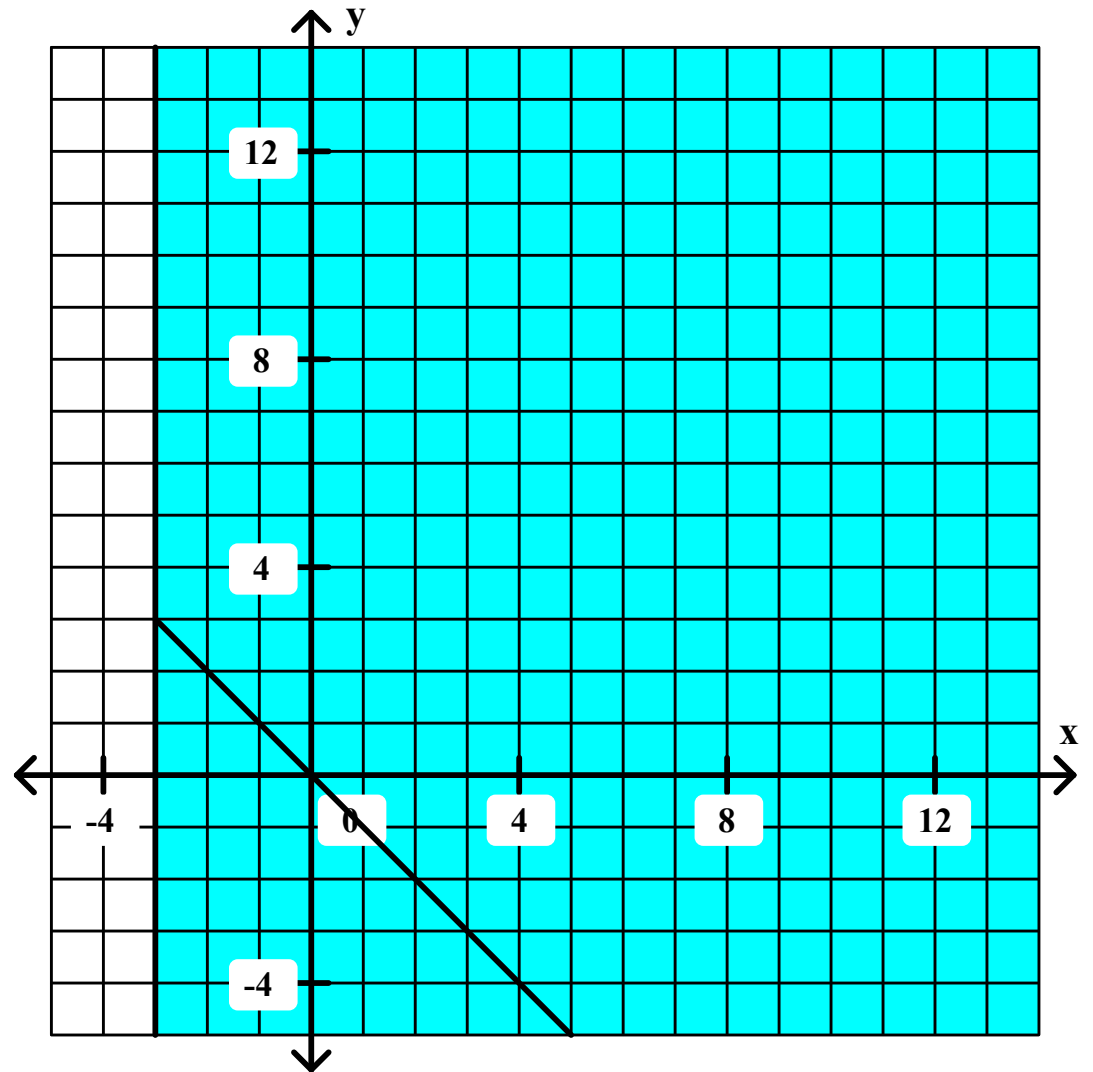
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General Algebra II CWS #1 Unit 5

Questions 5-8

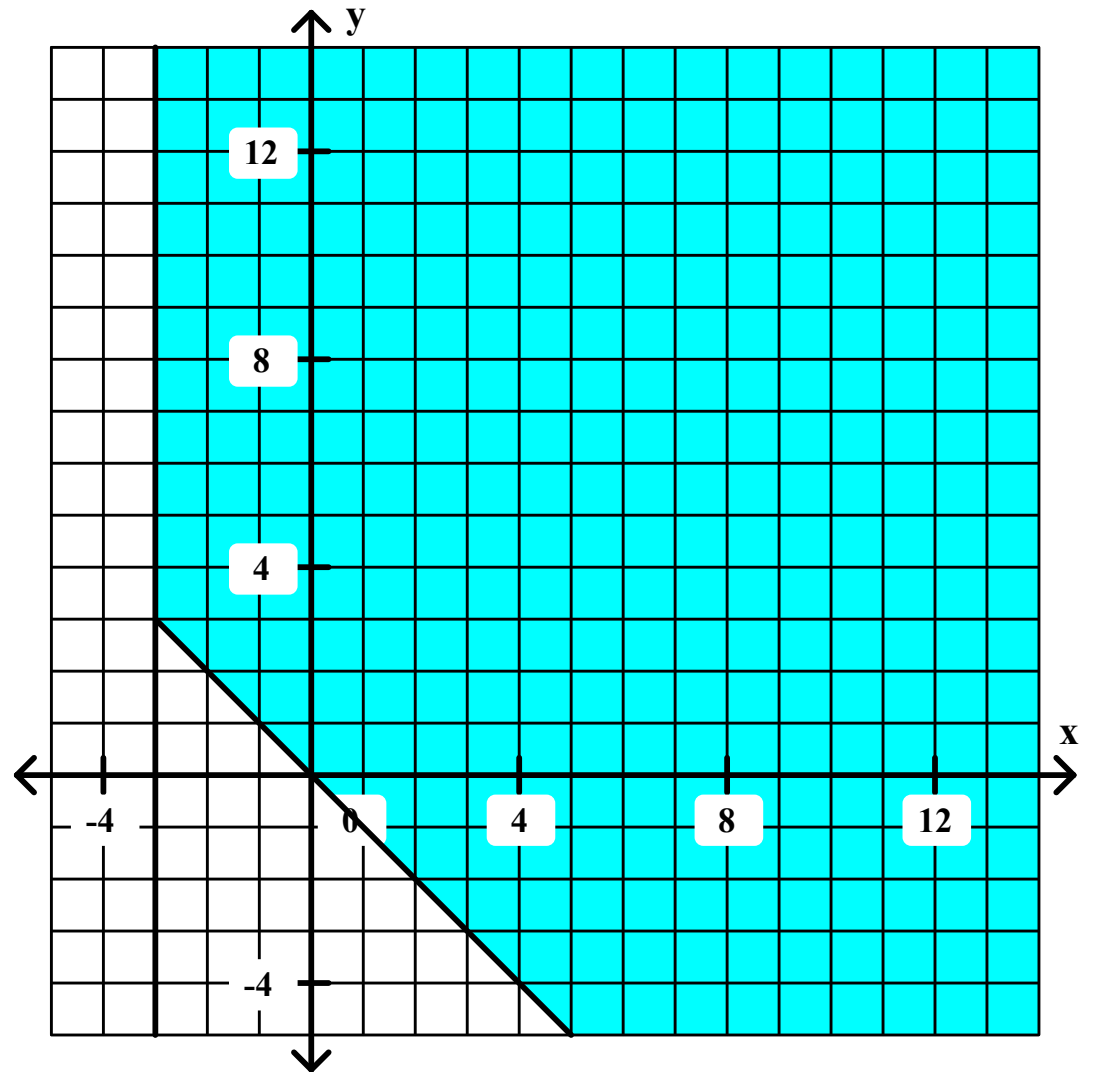
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General Algebra II CWS #1 Unit 5

Questions 5-8

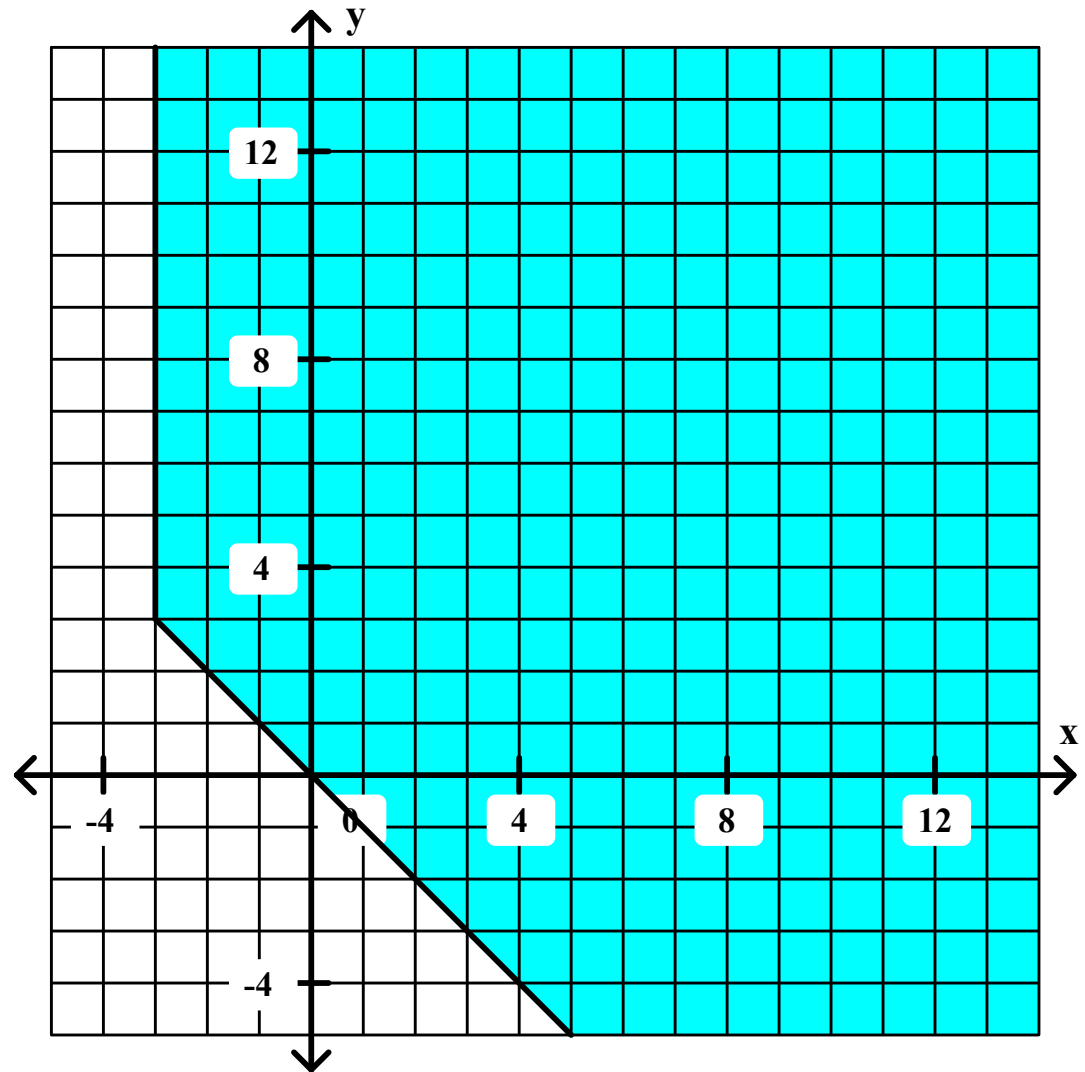
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General Algebra II CWS #1 Unit 5

Questions 5-8

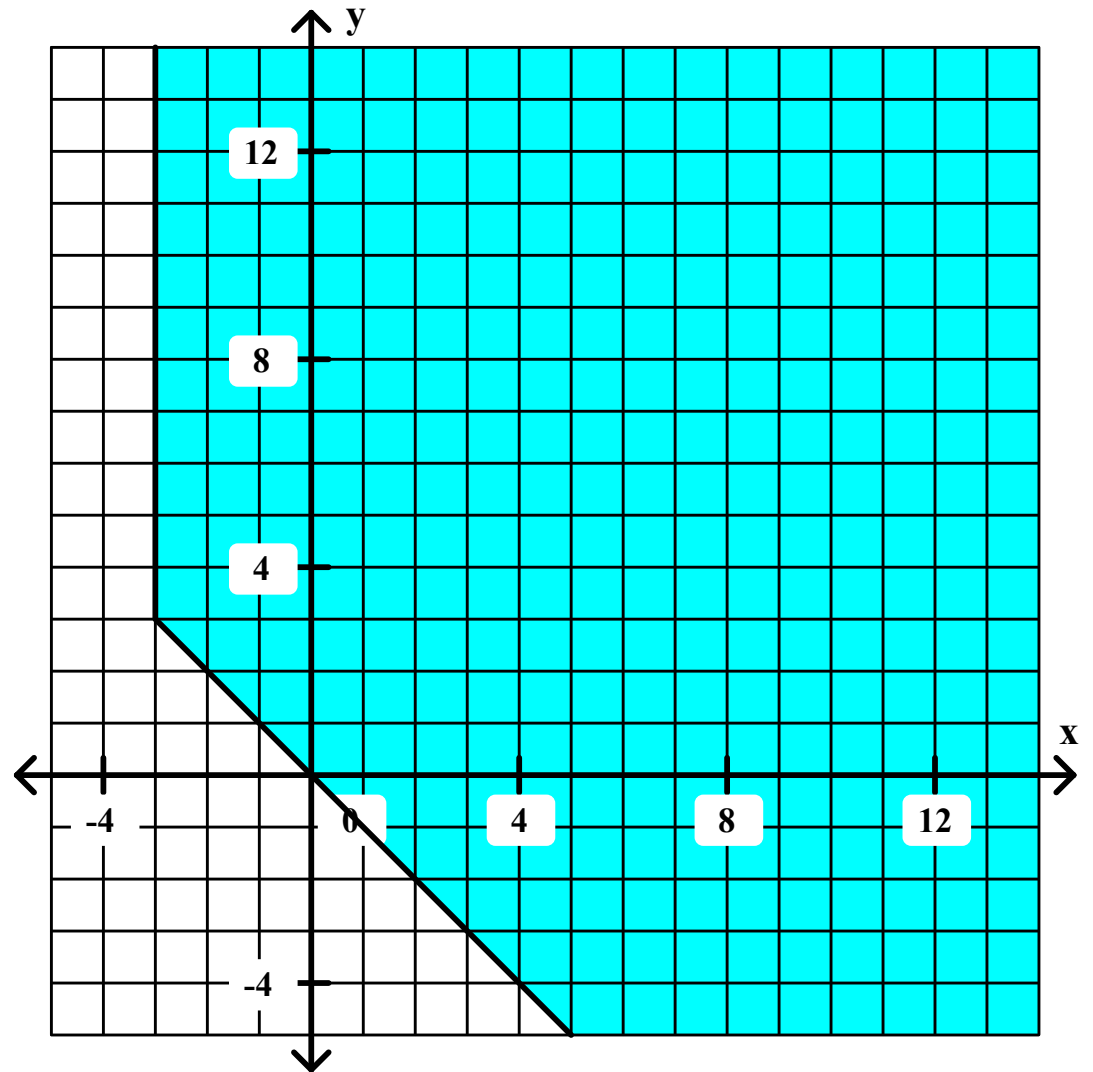
$$x + 3 \geq 0 \quad \Rightarrow \quad x \geq -3$$

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$$2x - 3y \leq 15 \quad \Rightarrow \quad y \geq \frac{2}{3}x - 5$$

$$2x + 3y \leq 36$$

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General Algebra II CWS #1 Unit 5

Questions 5-8

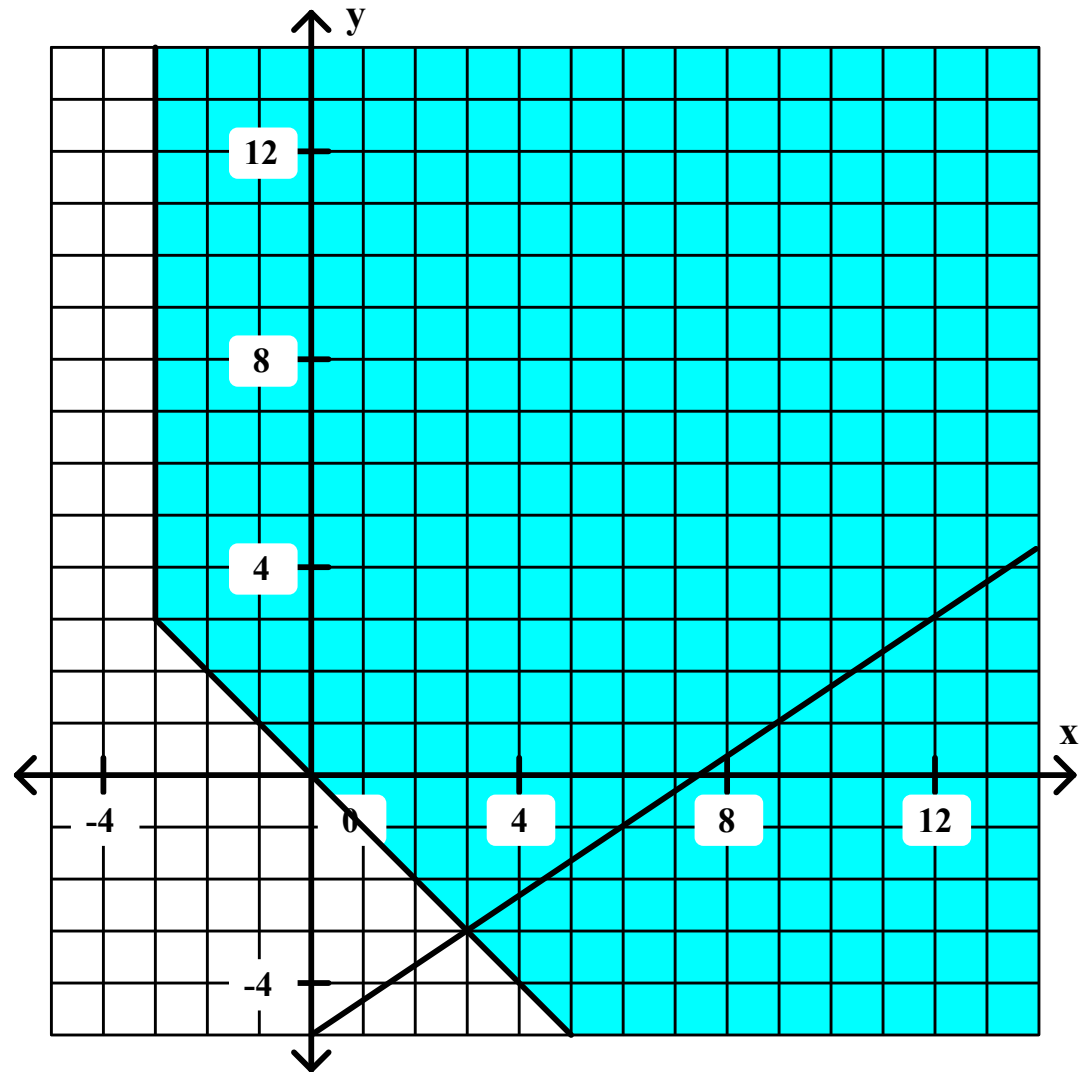
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General Algebra II CWS #1 Unit 5

Questions 5-8

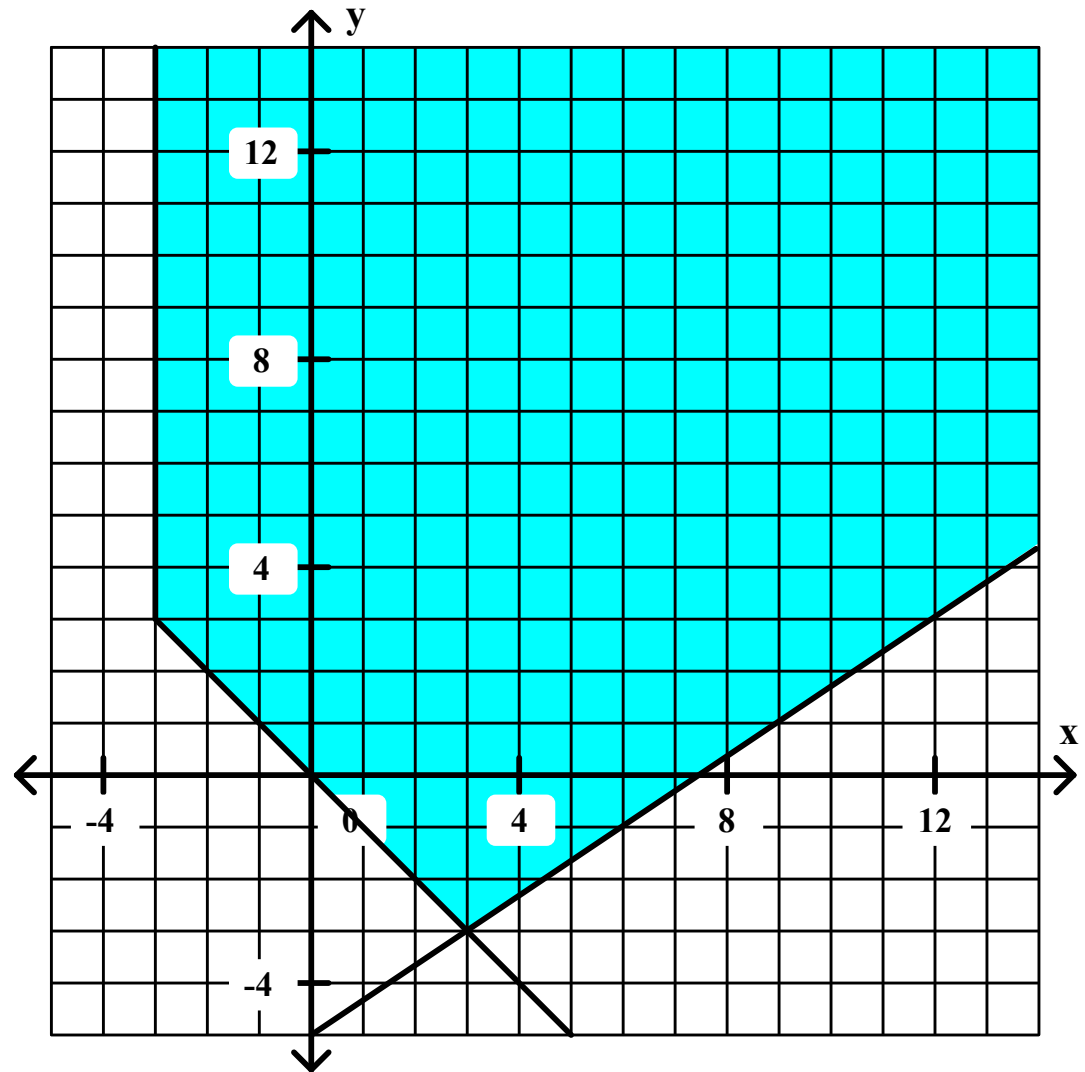
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General Algebra II CWS #1 Unit 5

Questions 5-8

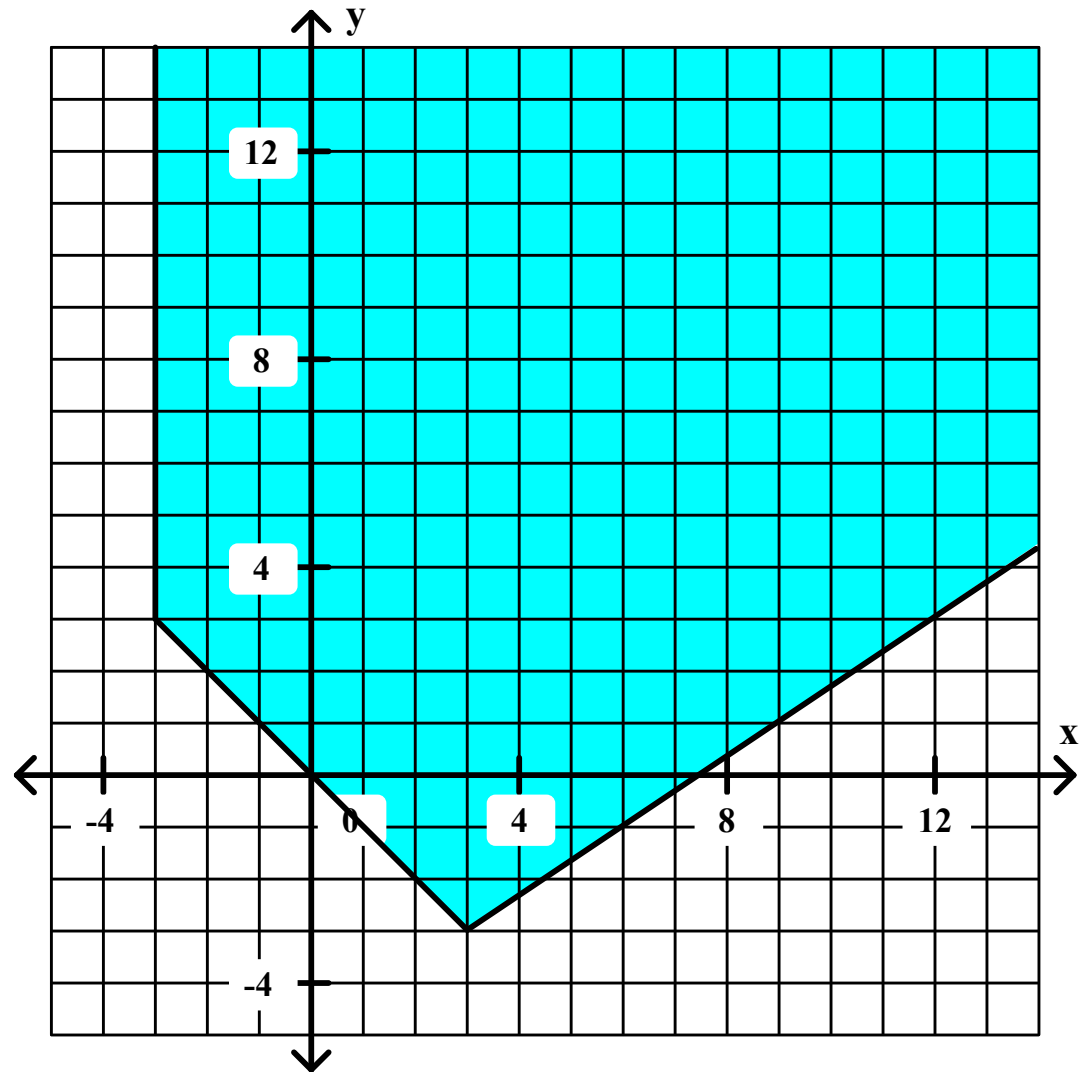
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General Algebra II CWS #1 Unit 5

Questions 5-8

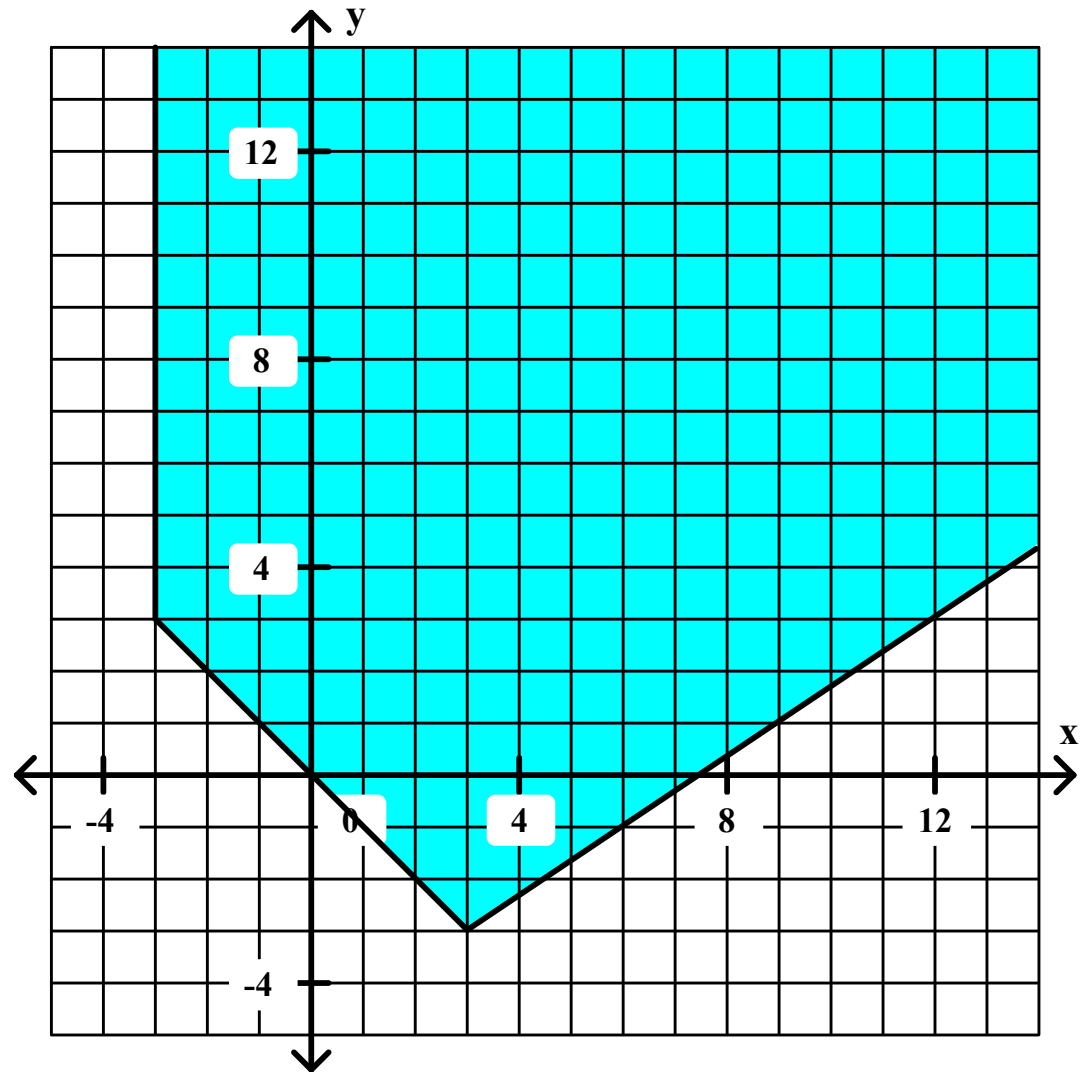
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General Algebra II CWS #1 Unit 5

Questions 5-8

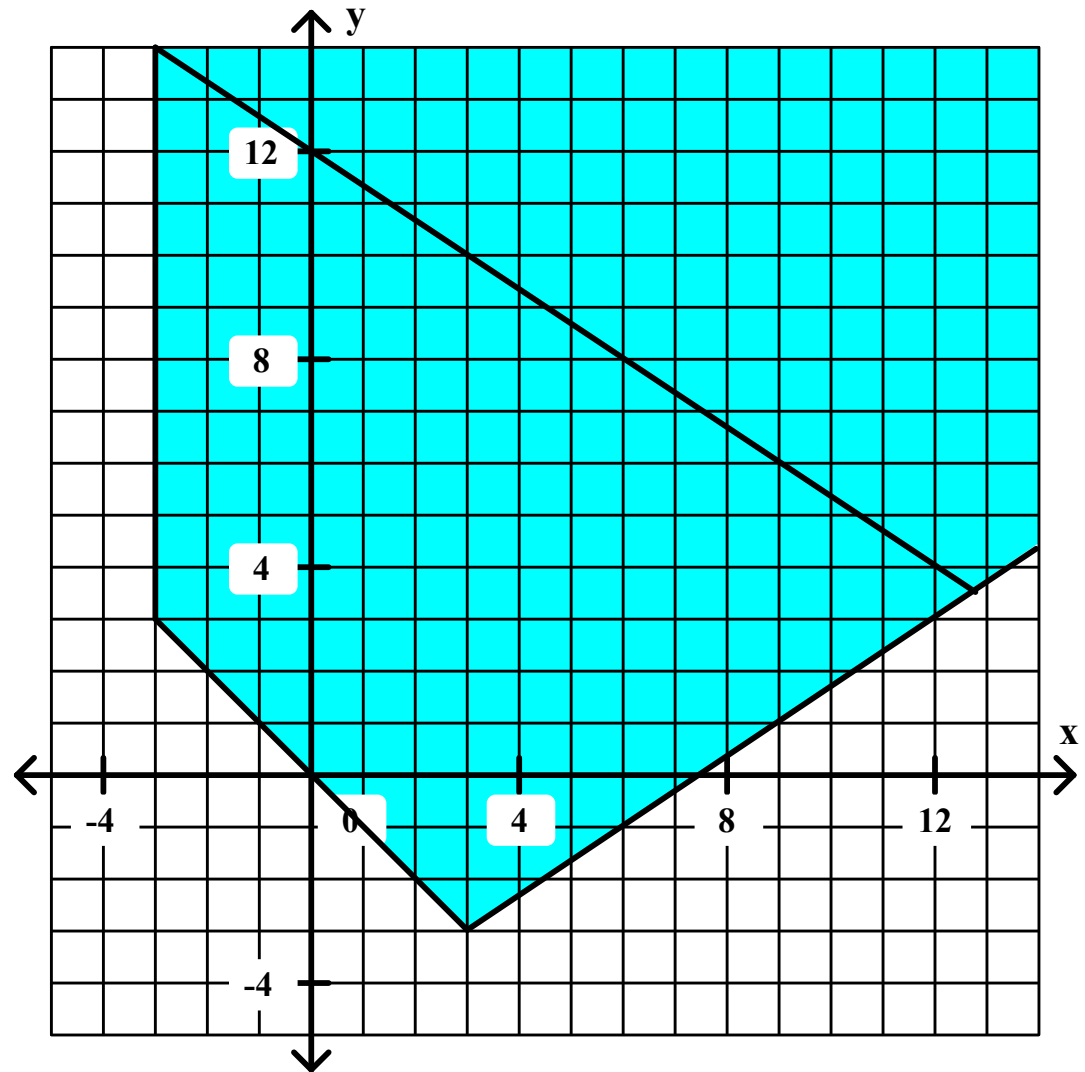
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General Algebra II CWS #1 Unit 5

Questions 5-8

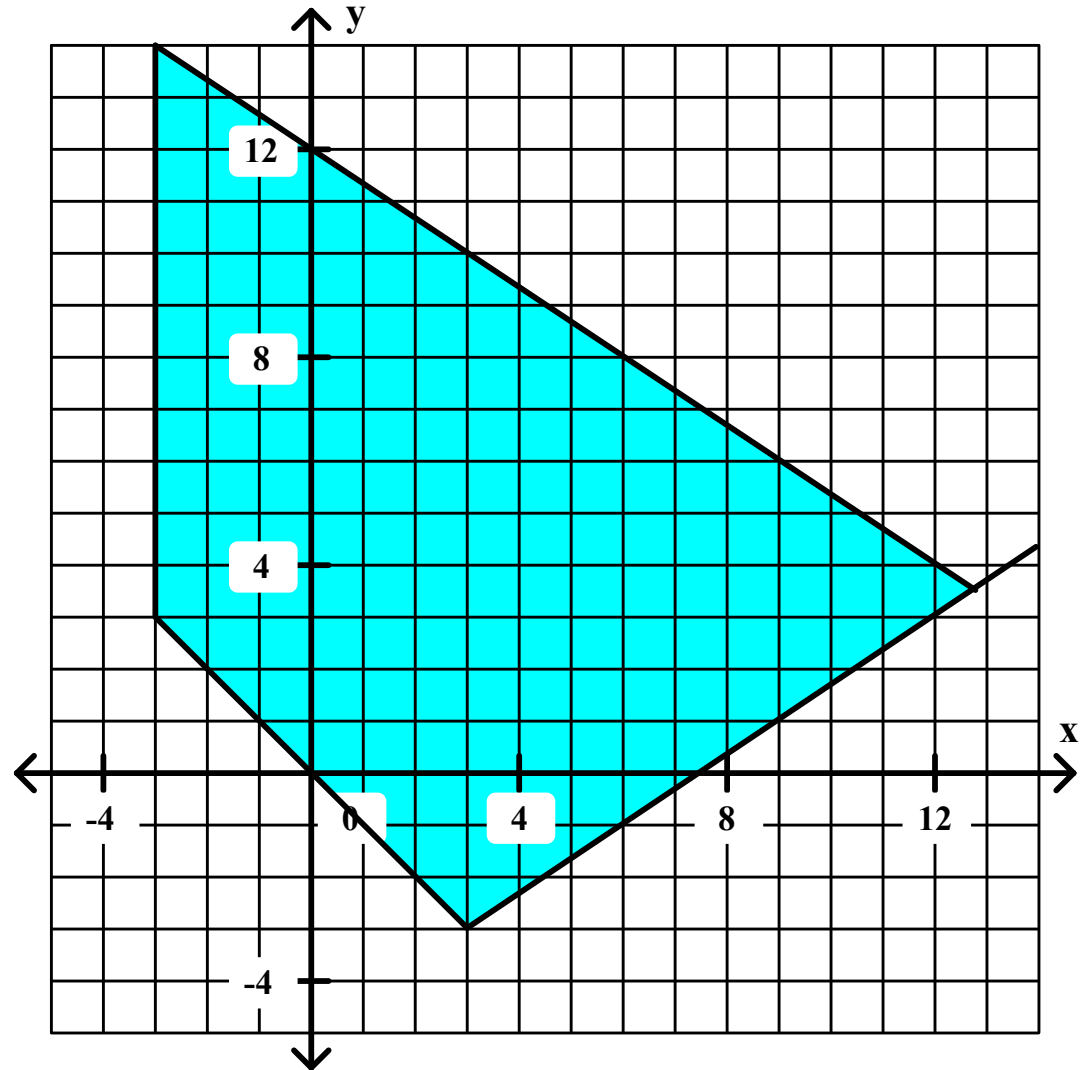
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General Algebra II CWS #1 Unit 5

Questions 5-8

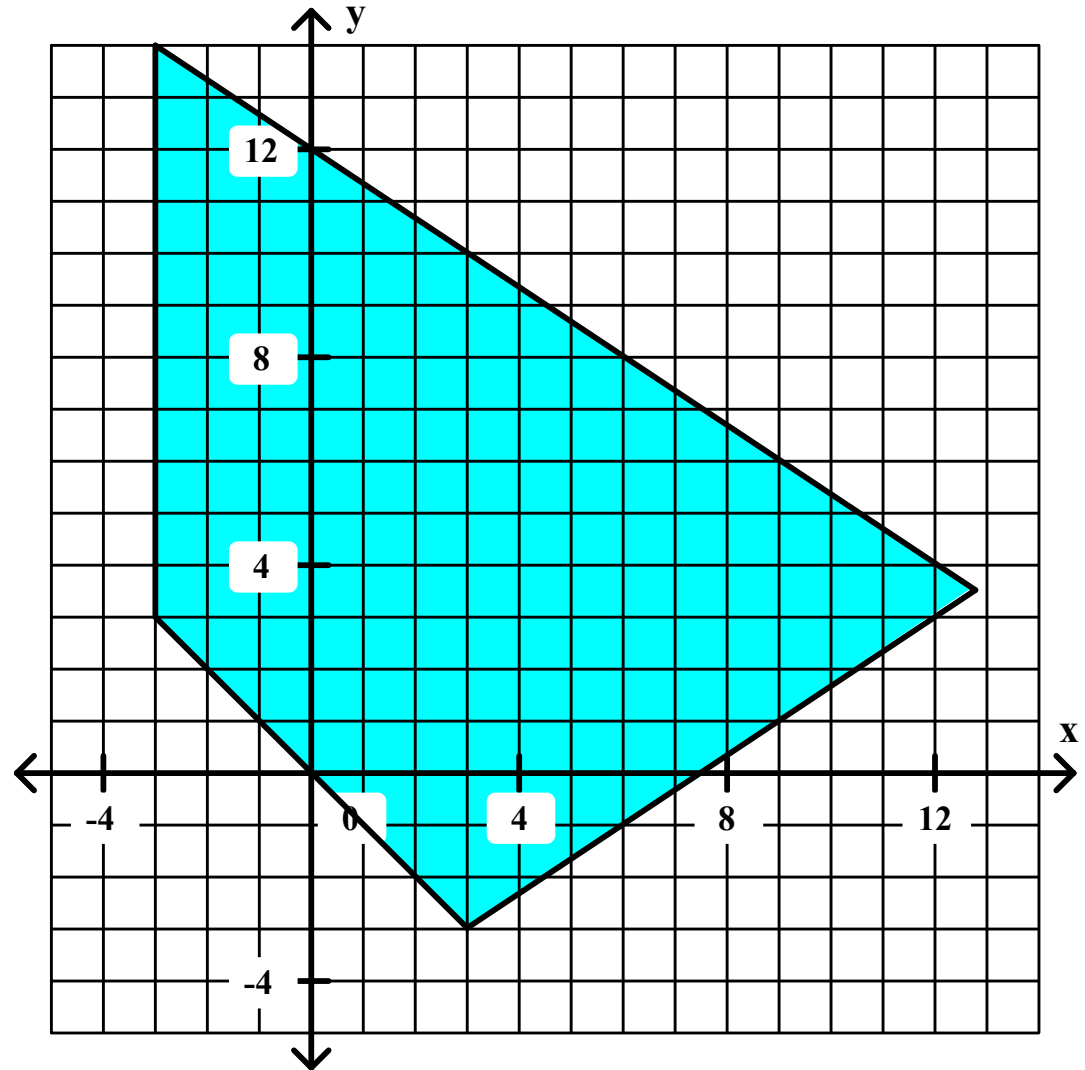
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General Algebra II CWS #1 Unit 5

Questions 5-8

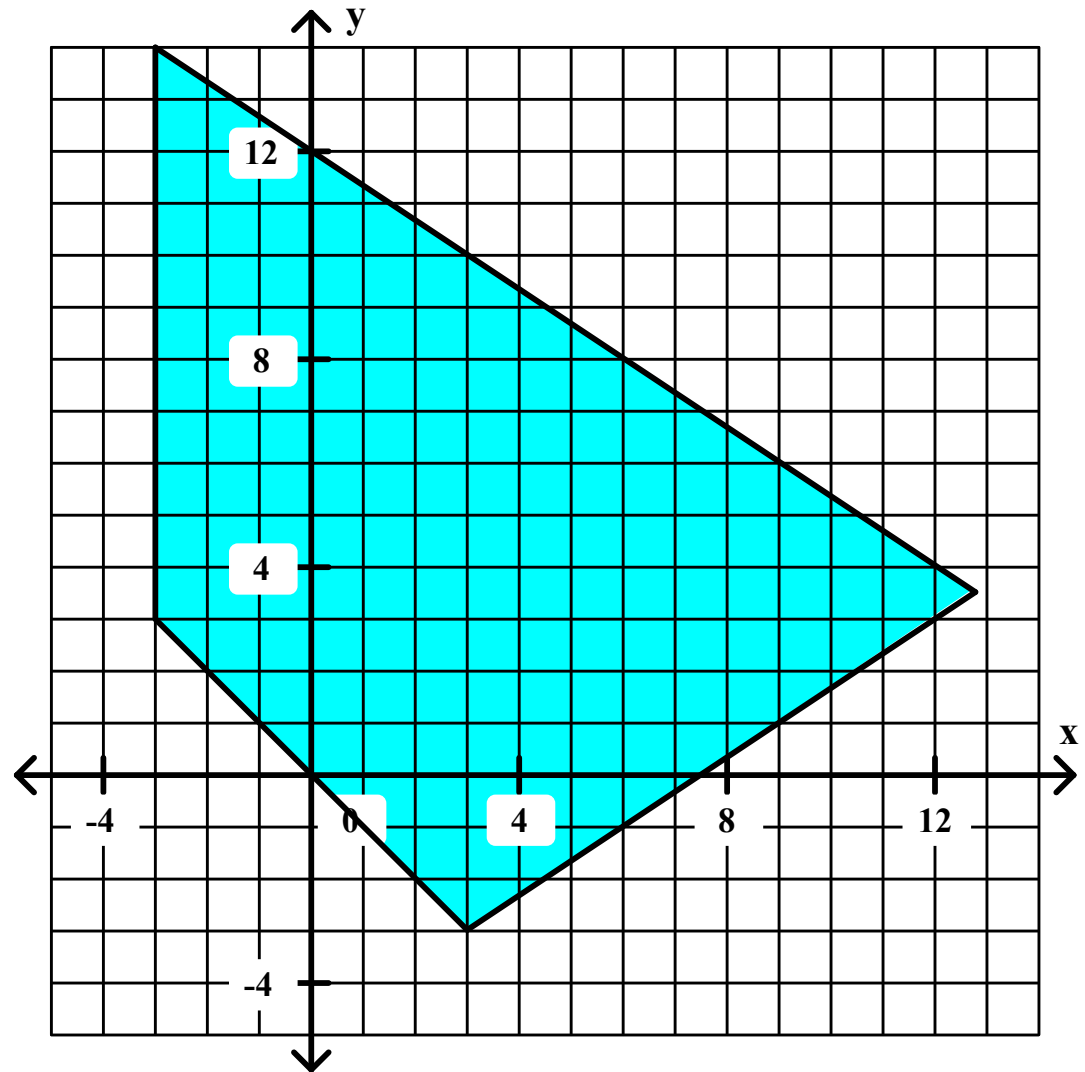
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General Algebra II CWS #1 Unit 5

Questions 5-8

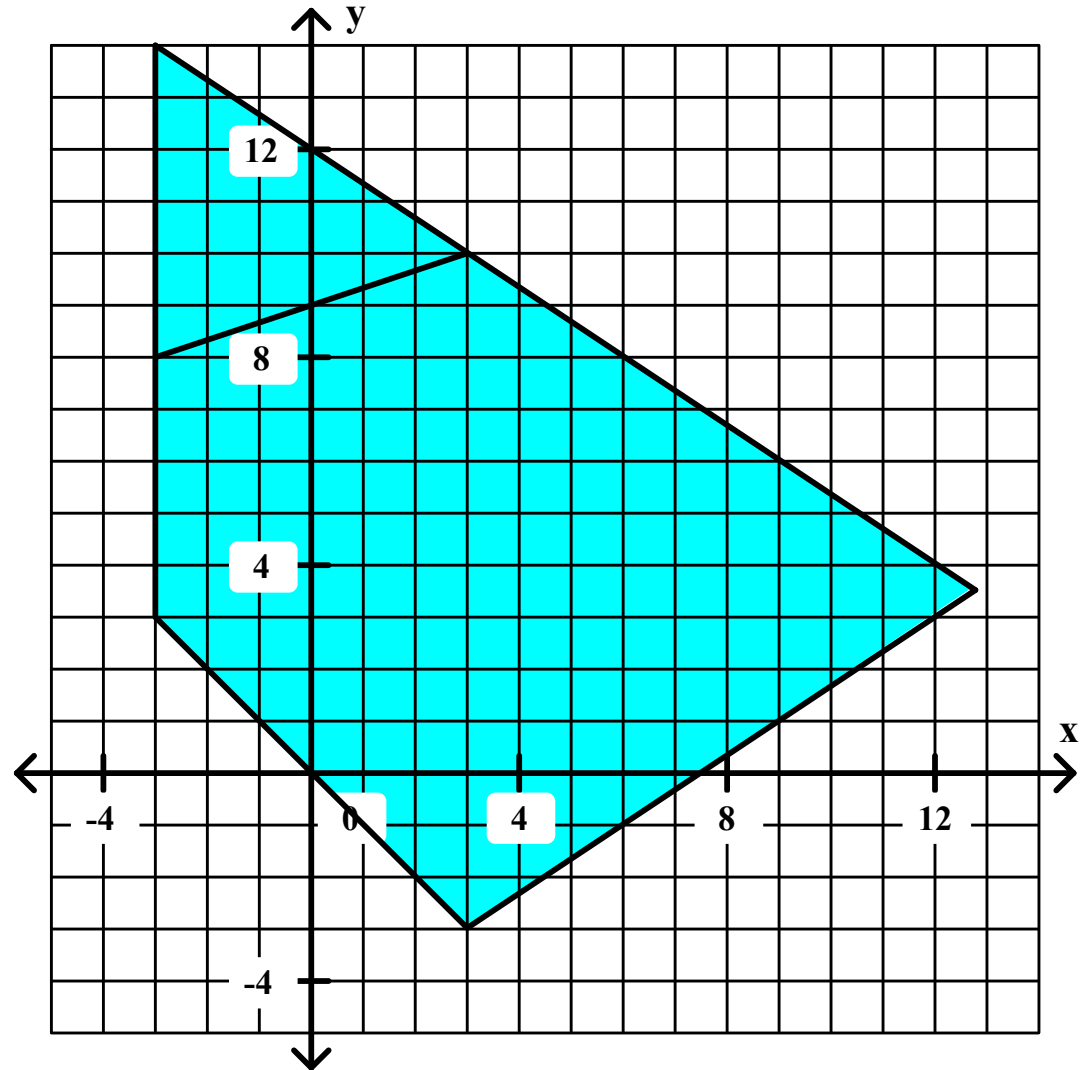
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General Algebra II CWS #1 Unit 5

Questions 5-8

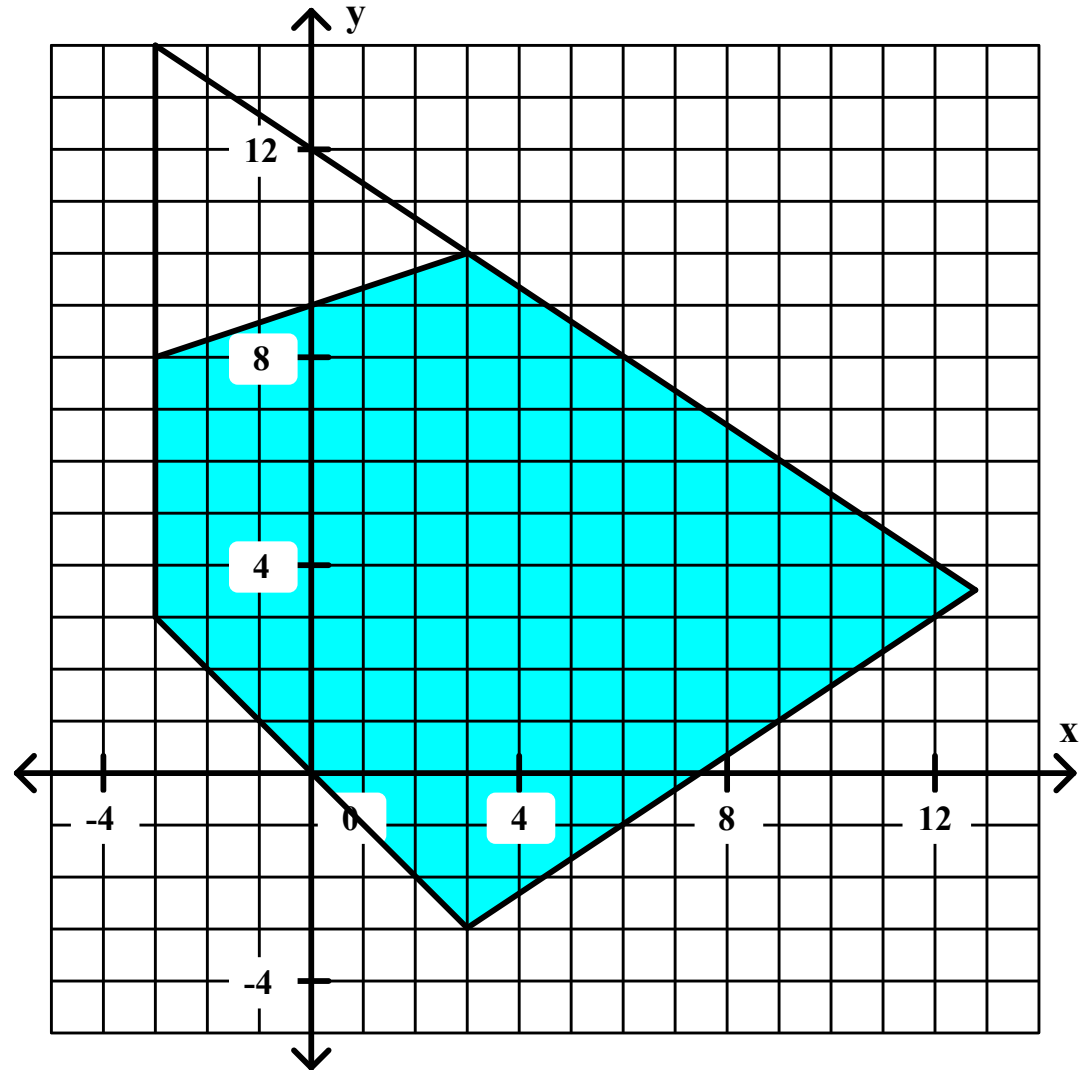
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General Algebra II CWS #1 Unit 5

Questions 5-8

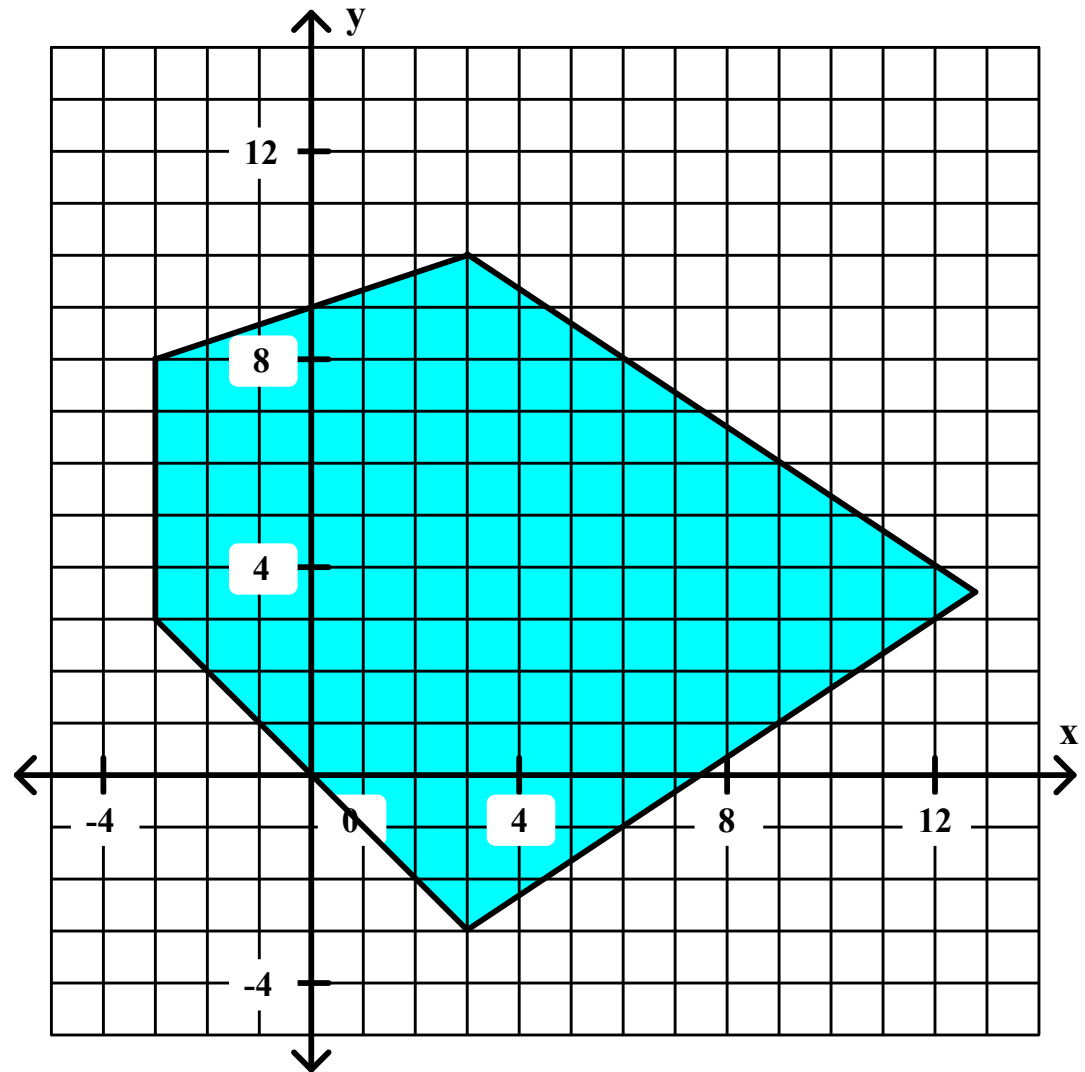
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General Algebra II CWS #1 Unit 5

Questions 5-8

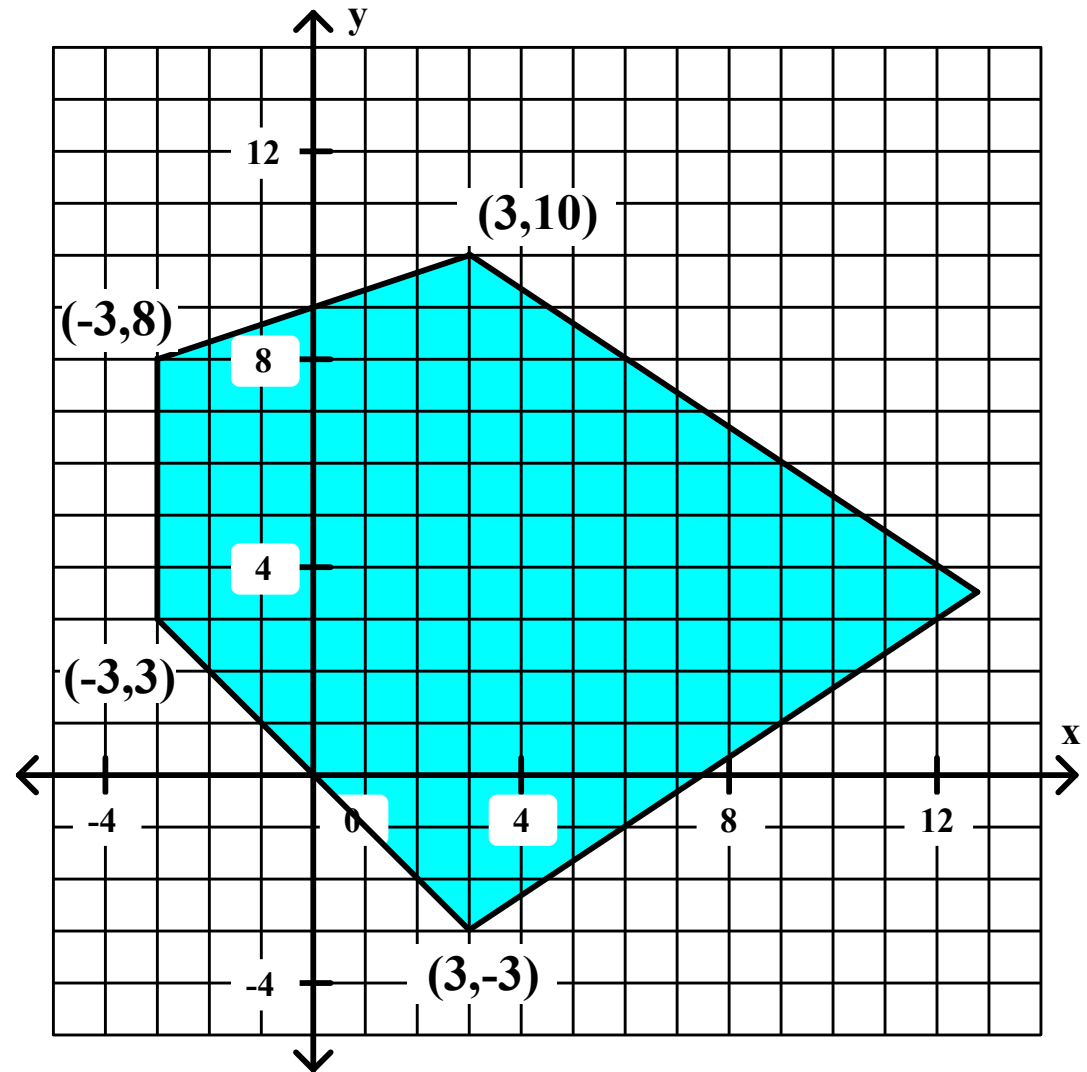
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General Algebra II CWS #1 Unit 5

Questions 5-8

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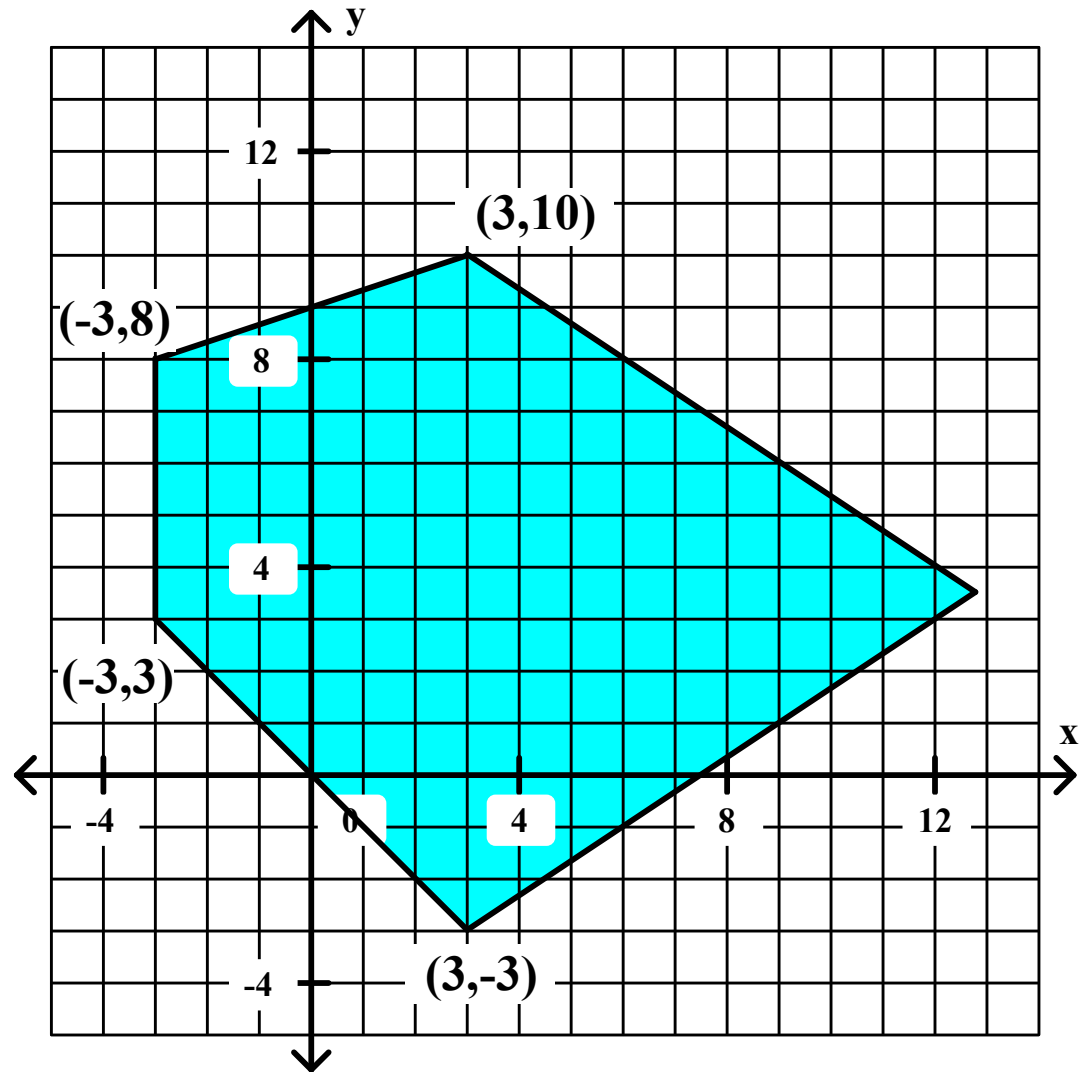
$$2x - 3y \leq 15 \quad \Rightarrow \quad y \geq \frac{2}{3}x - 5$$

$$2x + 3y \leq 36 \quad \Rightarrow \quad y \leq -\frac{2}{3}x + 12$$

$$x - 3y \geq -27 \quad \Rightarrow \quad y \leq \frac{1}{3}x + 9$$

$$2x - 3y = 15$$

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General Algebra II CWS #1 Unit 5

Questions 5-8

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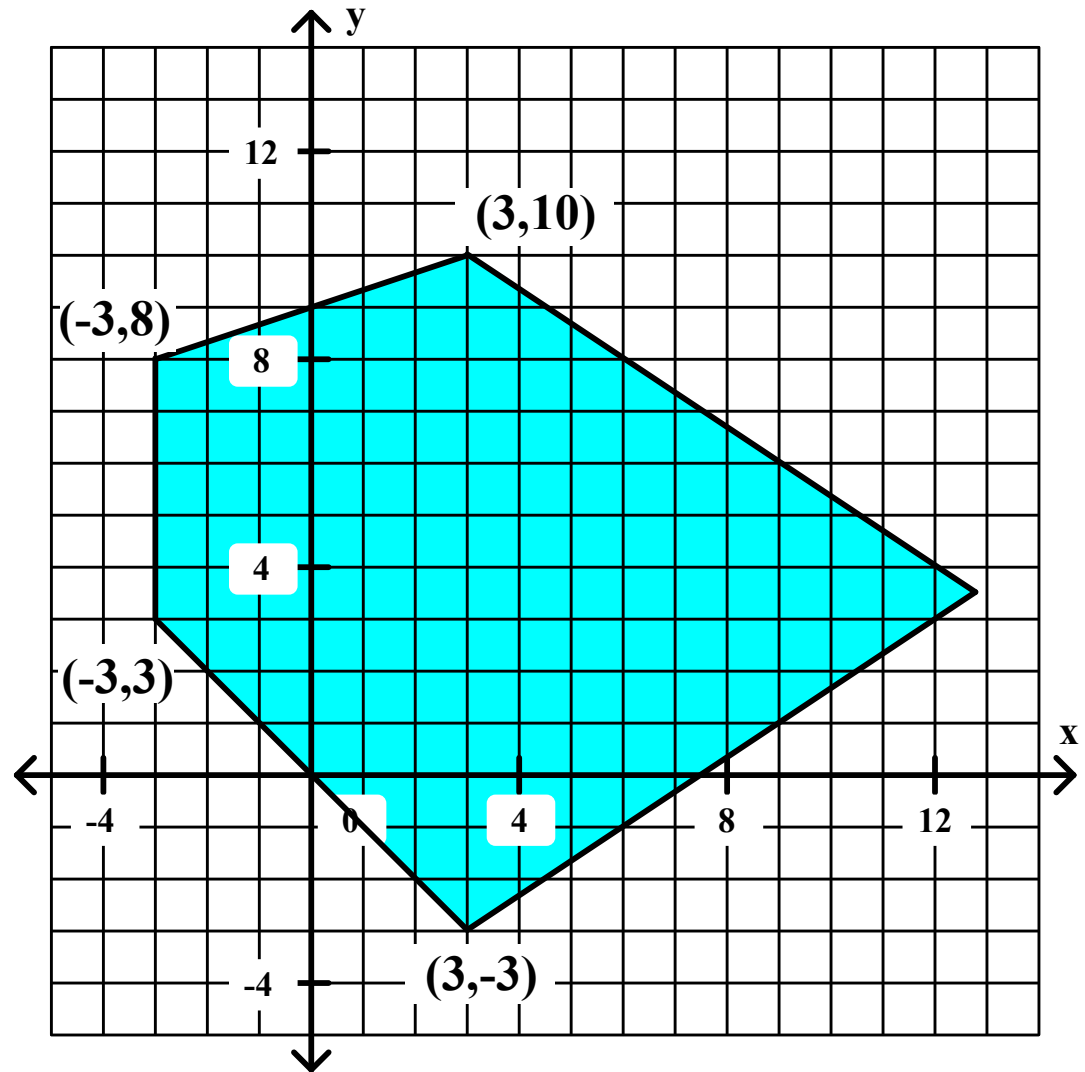
$$2x + 3y \leq 36 \quad \Rightarrow \quad y \leq -\frac{2}{3}x + 12$$

$$x - 3y \geq -27 \quad \Rightarrow \quad y \leq \frac{1}{3}x + 9$$

$$2x - 3y = 15$$

$$2x + 3y = 36$$

$$4x = 51$$



General Algebra II CWS #1 Unit 5

Questions 5-8

$$x + 3 \geq 0 \quad \Rightarrow \quad x \geq -3$$

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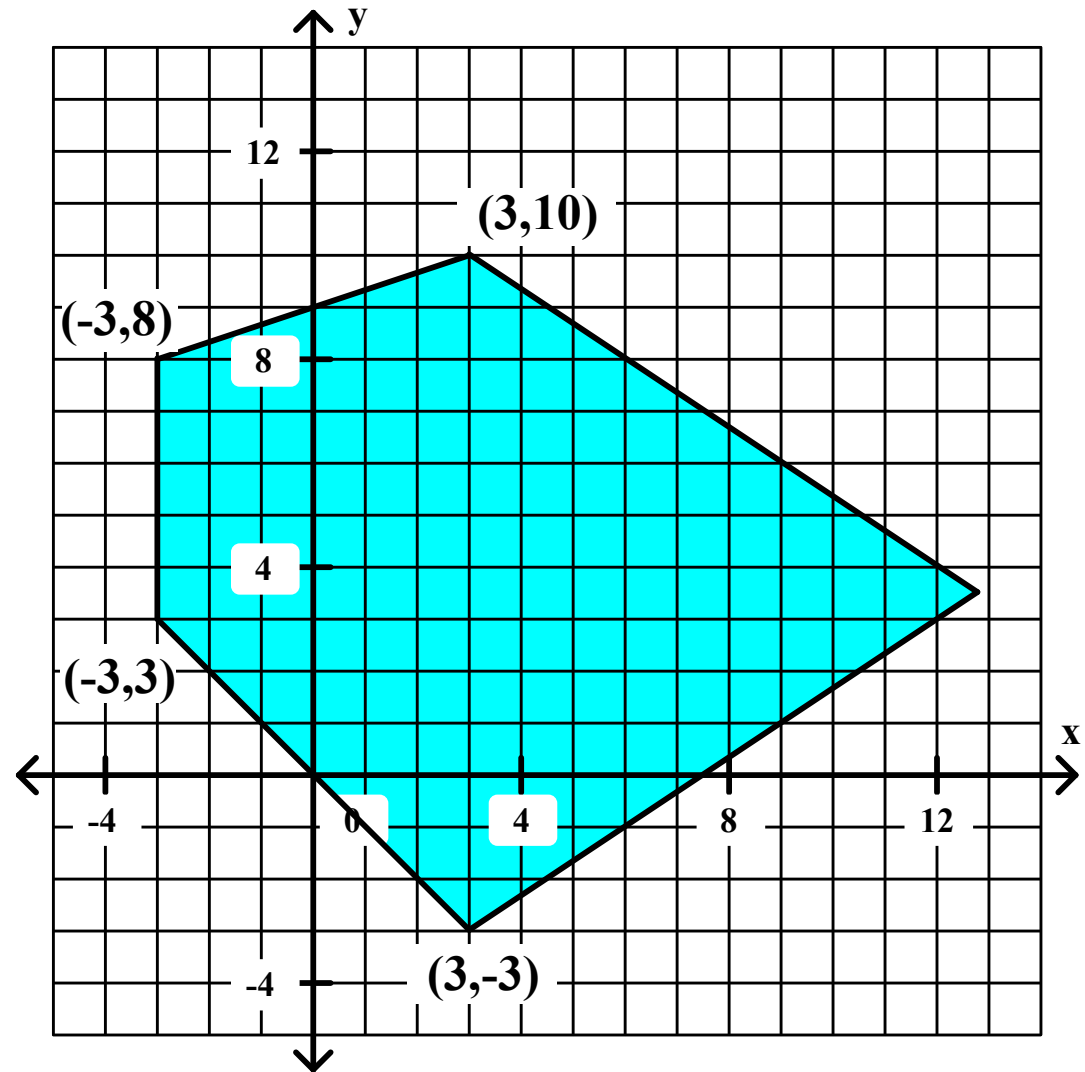
$$x - 3y \geq -27 \quad \Rightarrow \quad y \leq \frac{1}{3}x + 9$$

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$$4x = 51$$

$$x = 12.75$$



General Algebra II CWS #1 Unit 5

Questions 5-8

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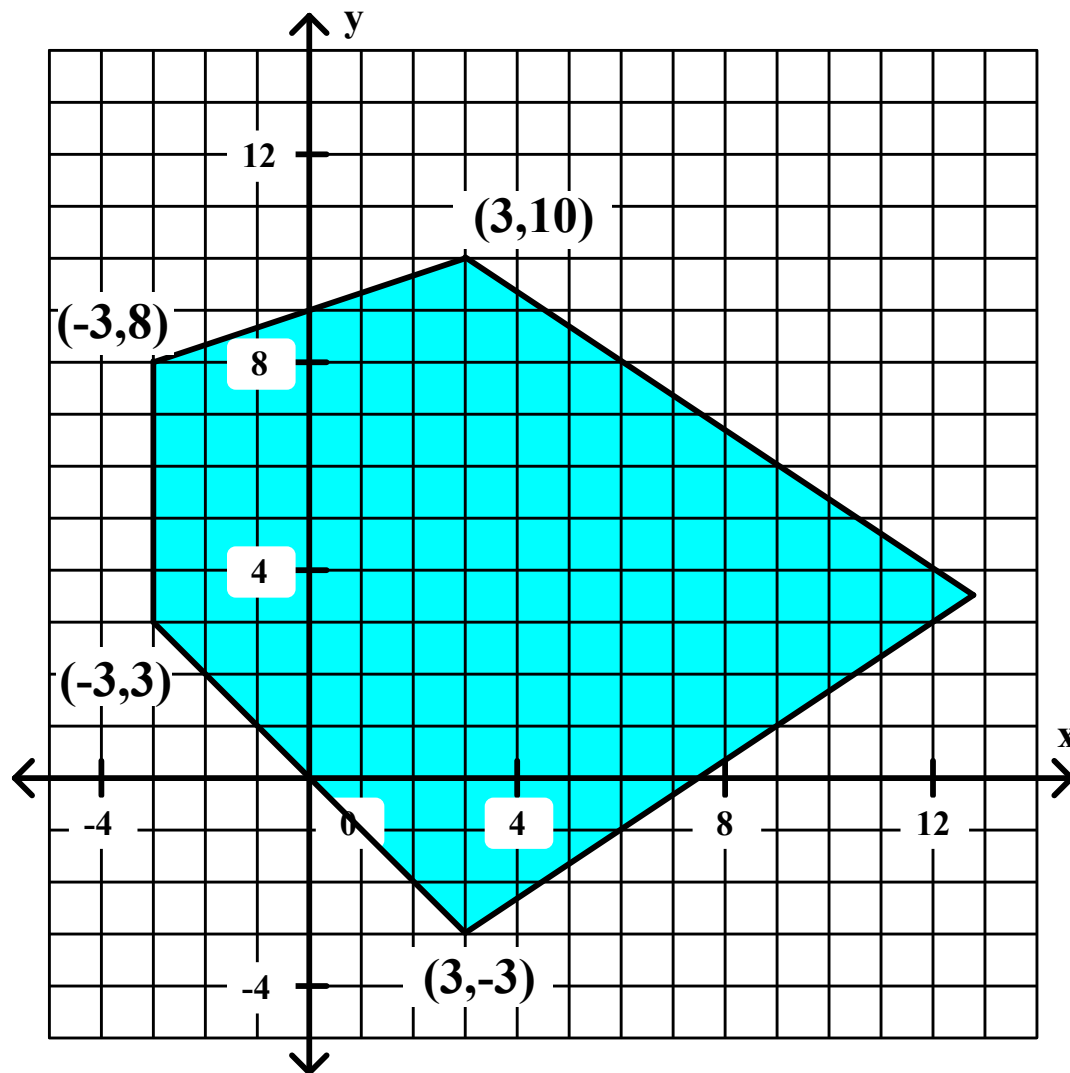
$$x - 3y \geq -27 \quad \Rightarrow \quad y \leq \frac{1}{3}x + 9$$

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General Algebra II CWS #1 Unit 5

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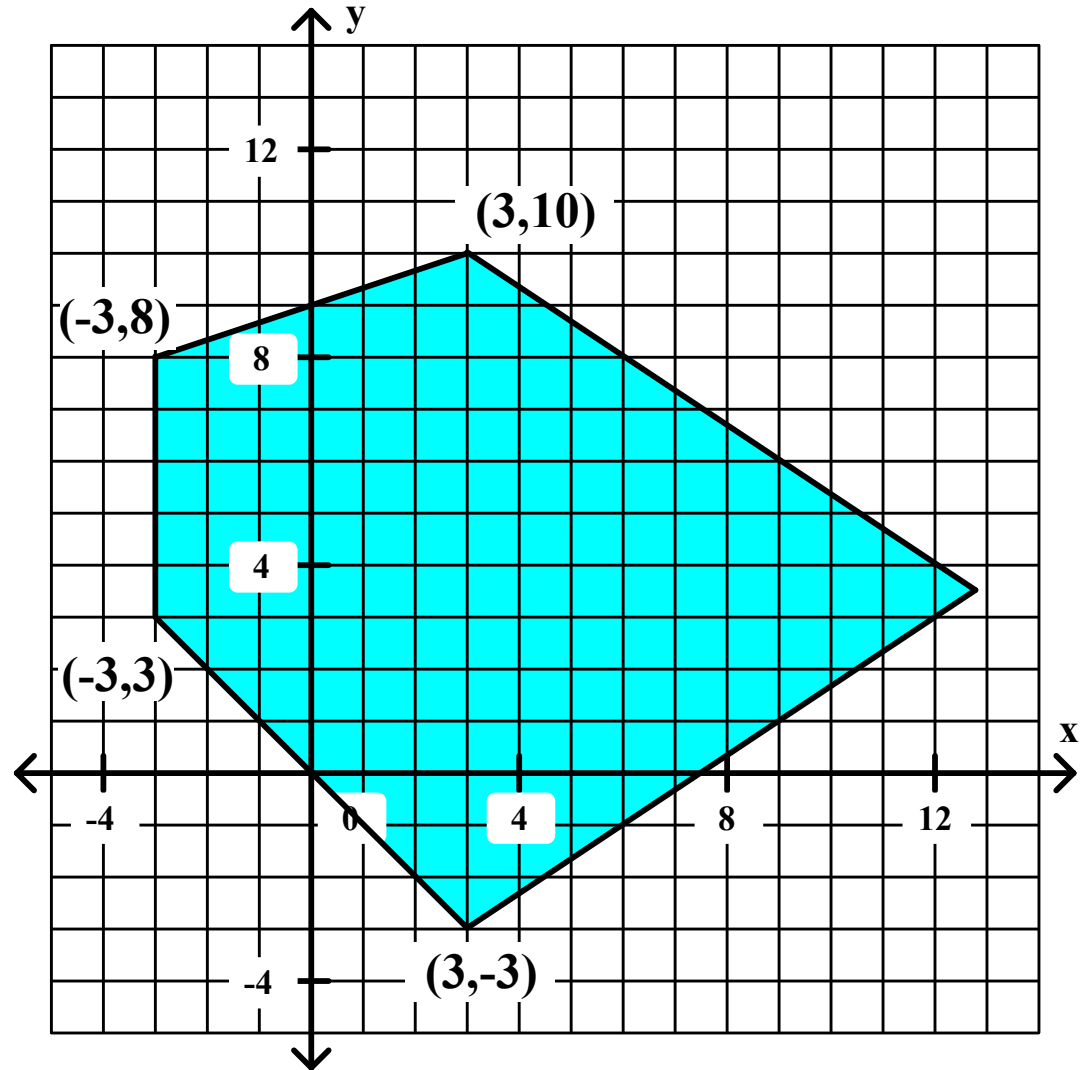
$$2x - 3y = 15 \quad -2x + 3y = -15$$

$$2x + 3y = 36 \quad 2x + 3y = 36$$

$$4x = 51$$

$$x = 12.75$$

$$6y = 21$$



General Algebra II CWS #1 Unit 5

Questions 5-8

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$$x + y \geq 0 \quad \Rightarrow \quad y \geq -x$$

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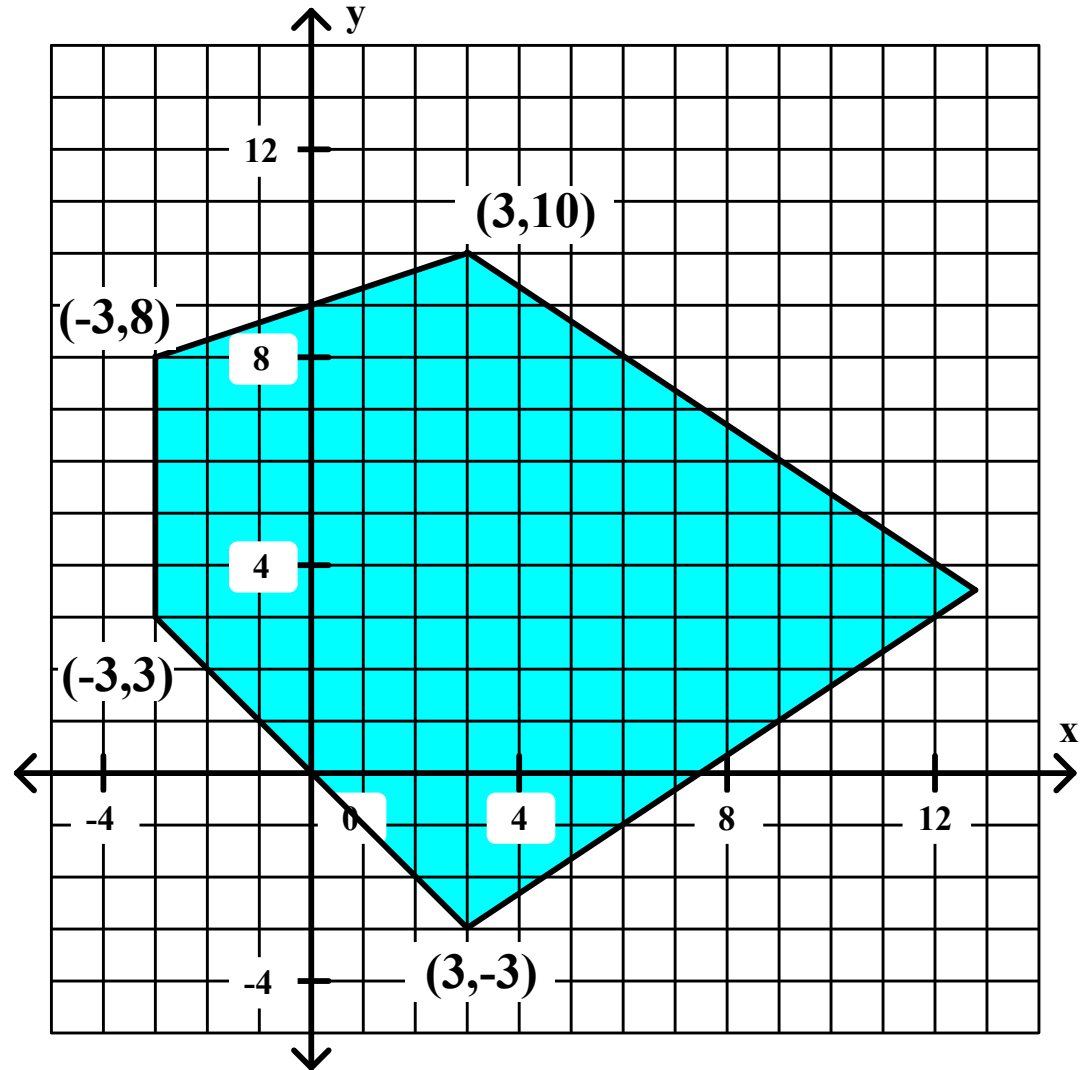
$$2x + 3y = 36 \quad 2x + 3y = 36$$

$$4x = 51$$

$$x = 12.75$$

$$6y = 21$$

$$y = 3.5$$



General Algebra II CWS #1 Unit 5

Questions 5-8

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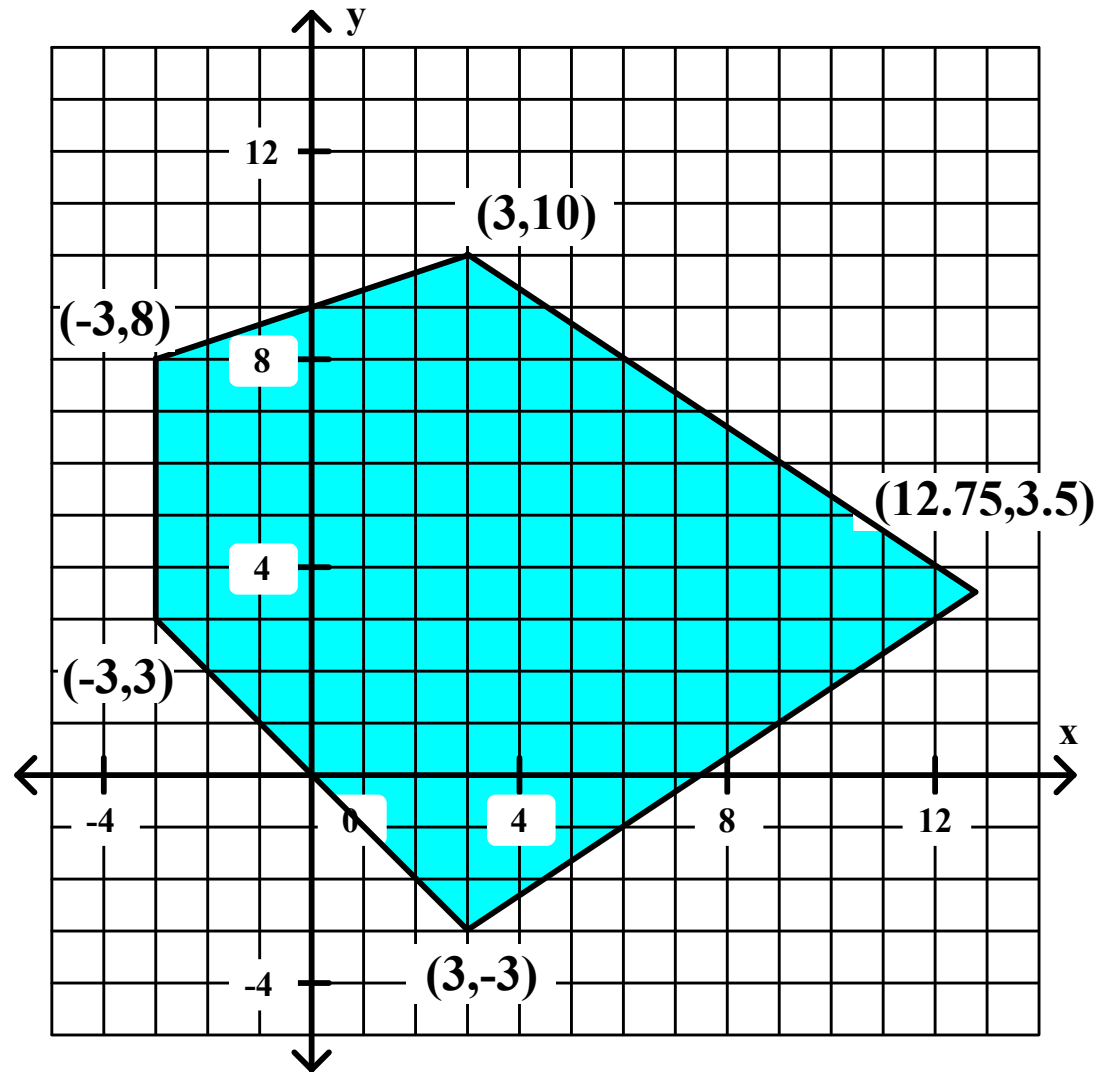
$$2x + 3y = 36 \quad 2x + 3y = 36$$

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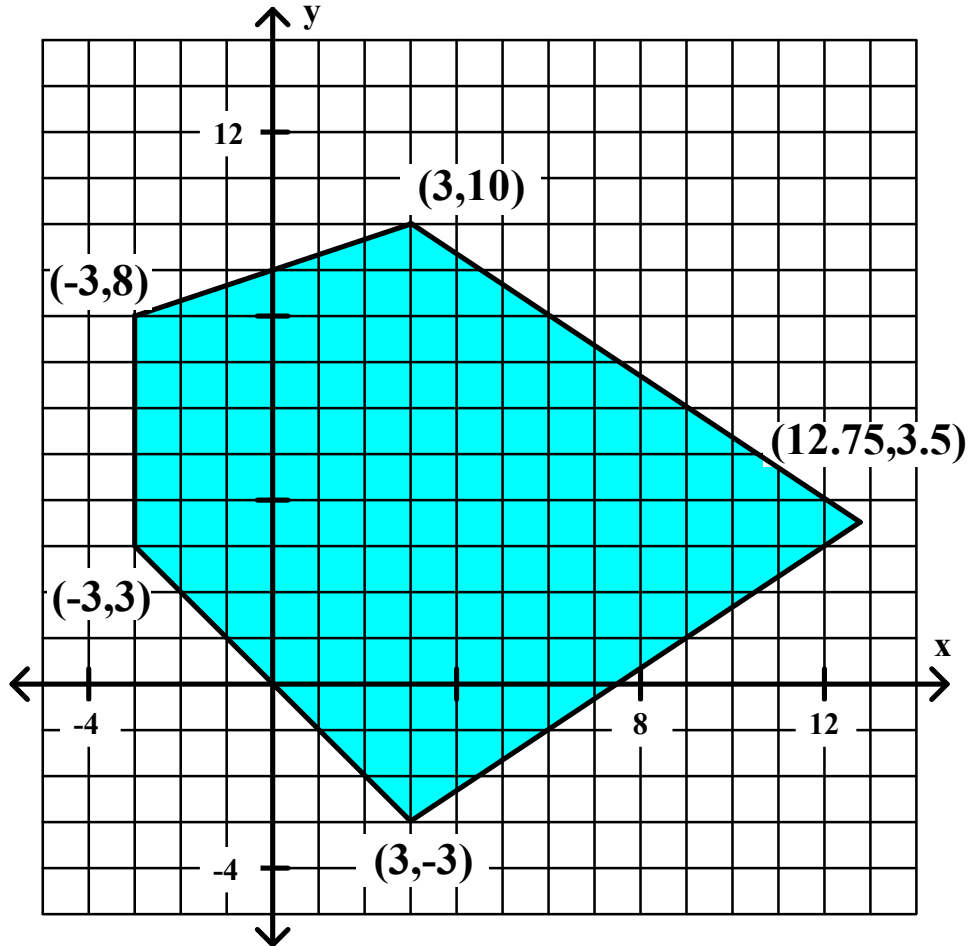
$$x = 12.75$$

$$6y = 21$$

$$y = 3.5$$



General Algebra II CWS #1 Unit 5

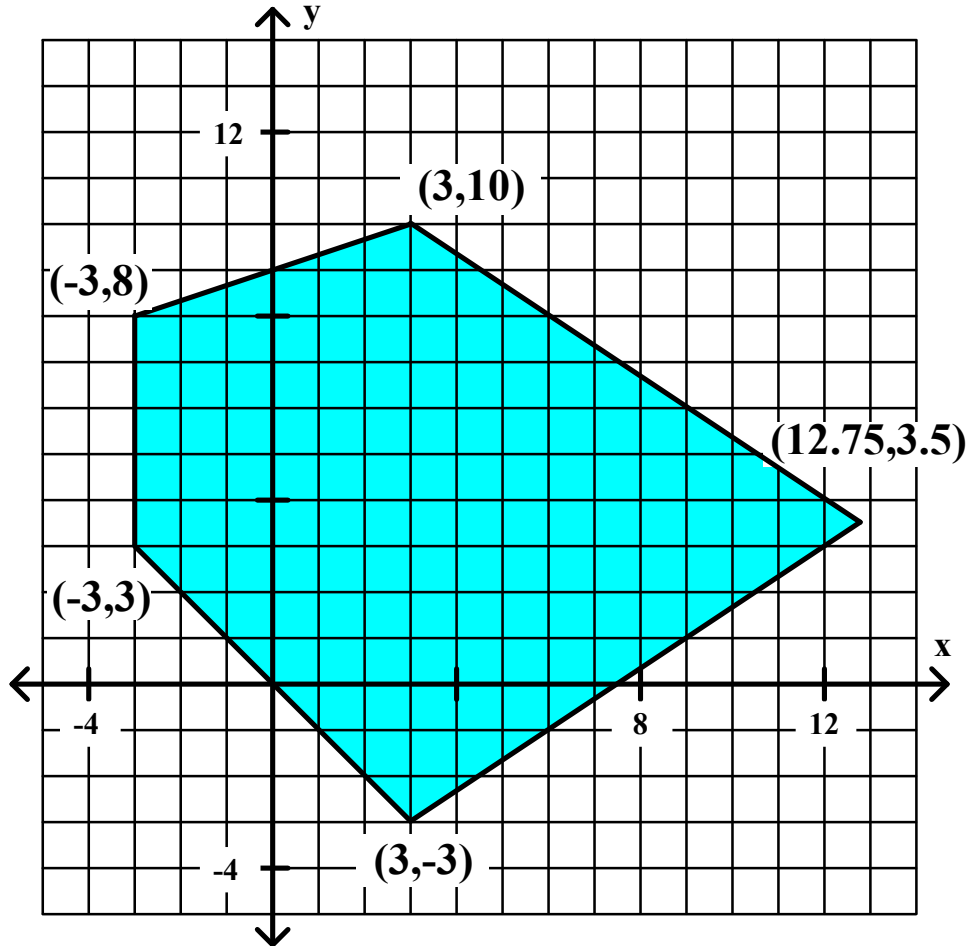


5. $F = x + 2y$

$F_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

$F_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

General Algebra II CWS #1 Unit 5



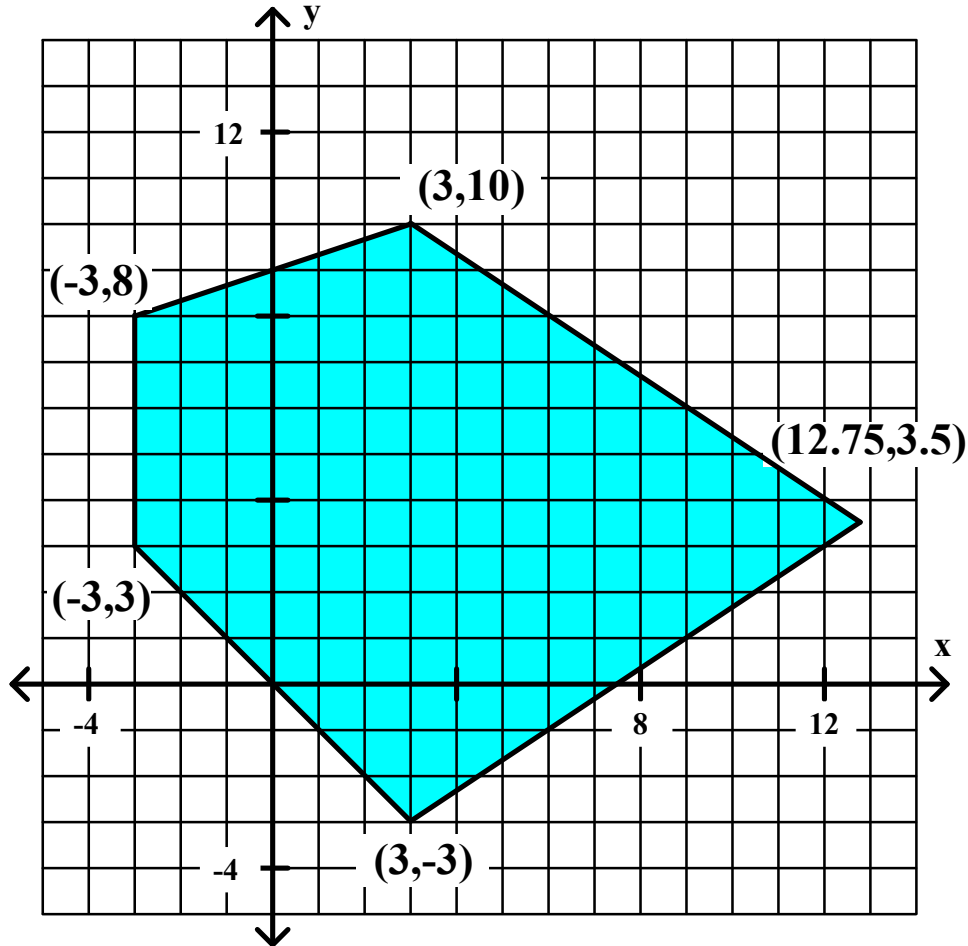
The **maximum** and the **minimum** values of F will occur at a vertex of the region.

5. $F = x + 2y$

$F_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

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General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

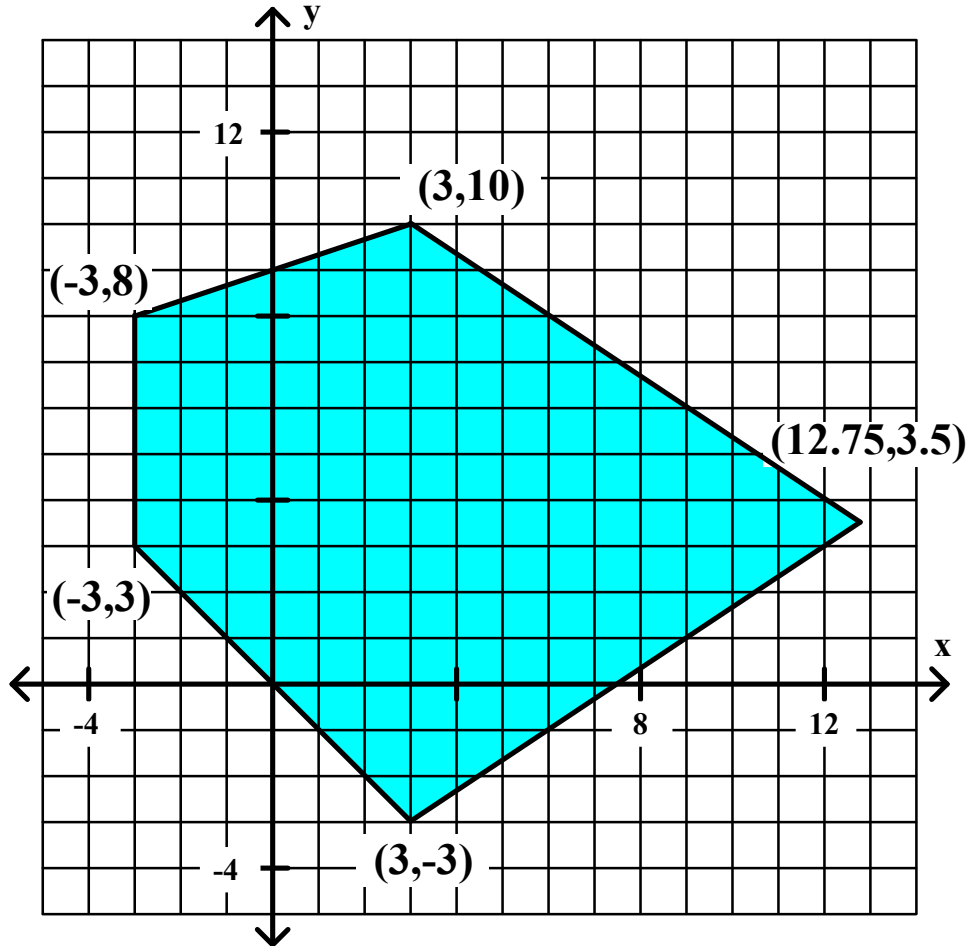
5. $F = x + 2y$

$F_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

$F_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

At (3,10) $\implies F = 3 + 20 = \mathbf{23}$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$5. \quad F = x + 2y$$

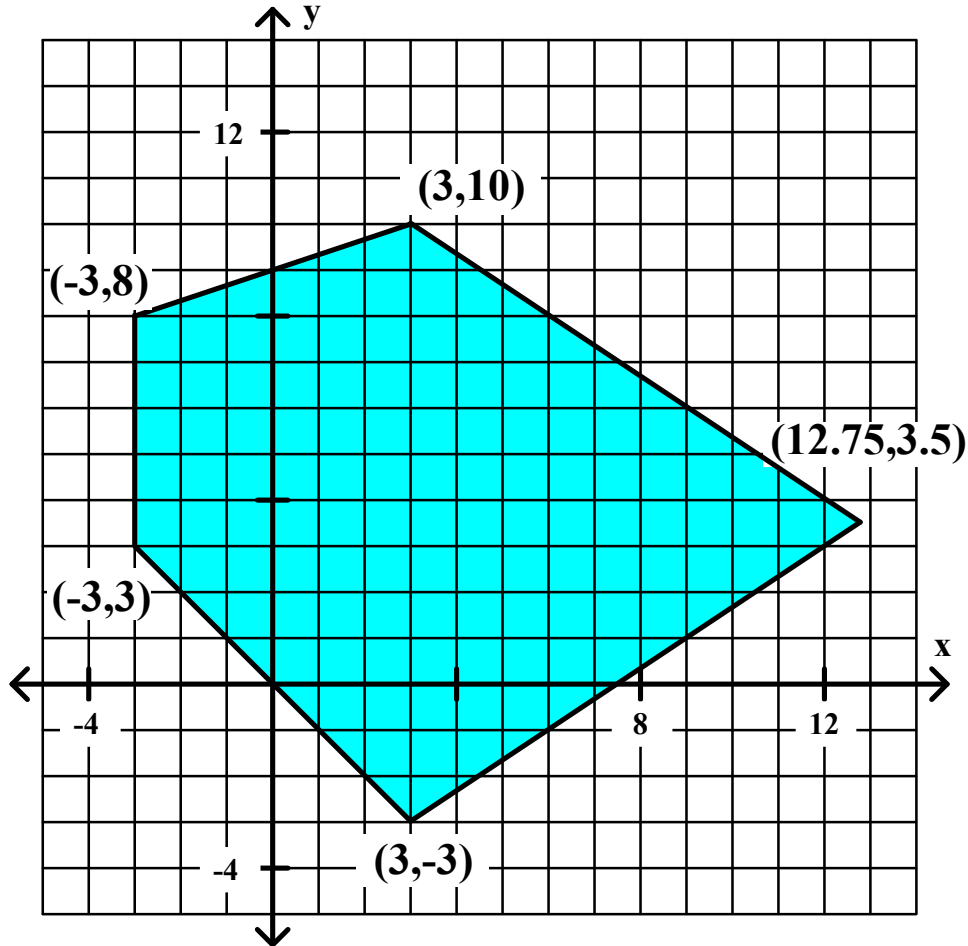
$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \implies \quad F = 3 + 20 = \mathbf{23}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -3 + 16 = \mathbf{13}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$5. \quad F = x + 2y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

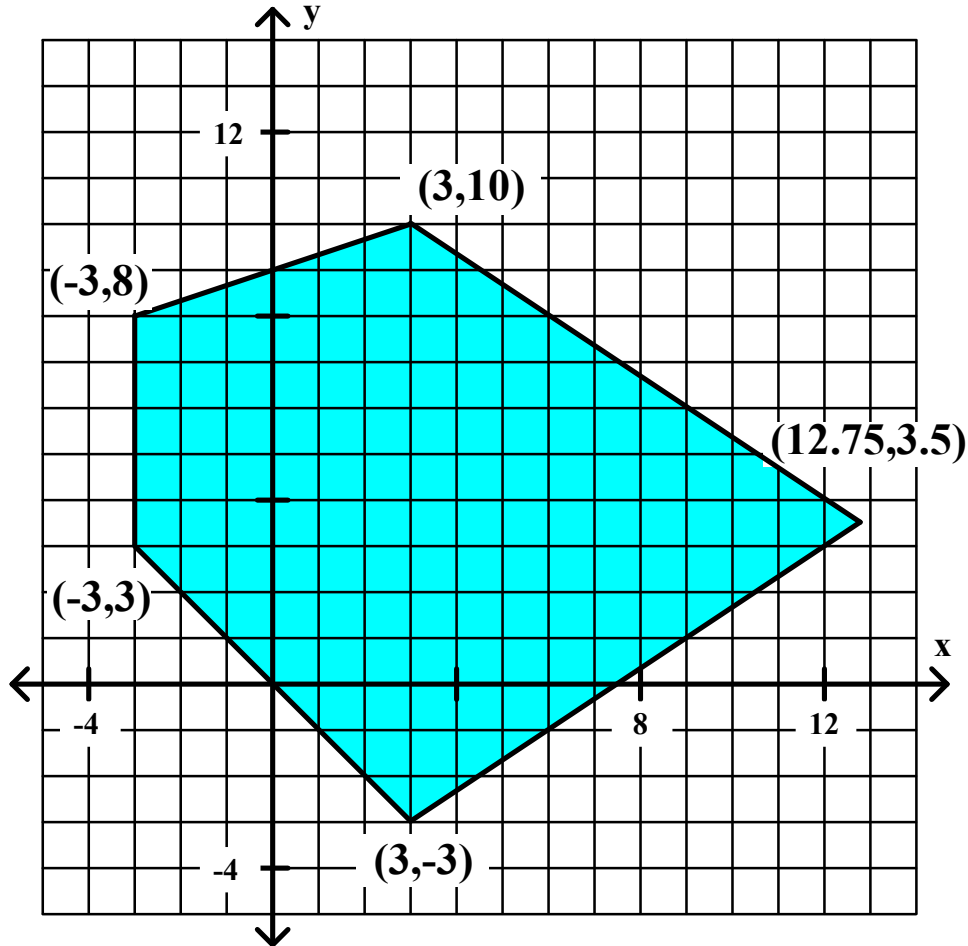
$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \implies \quad F = 3 + 20 = \mathbf{23}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -3 + 16 = \mathbf{13}$$

$$\text{At } (-3, 3) \quad \implies \quad F = -3 + 6 = \mathbf{3}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$5. \quad F = x + 2y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

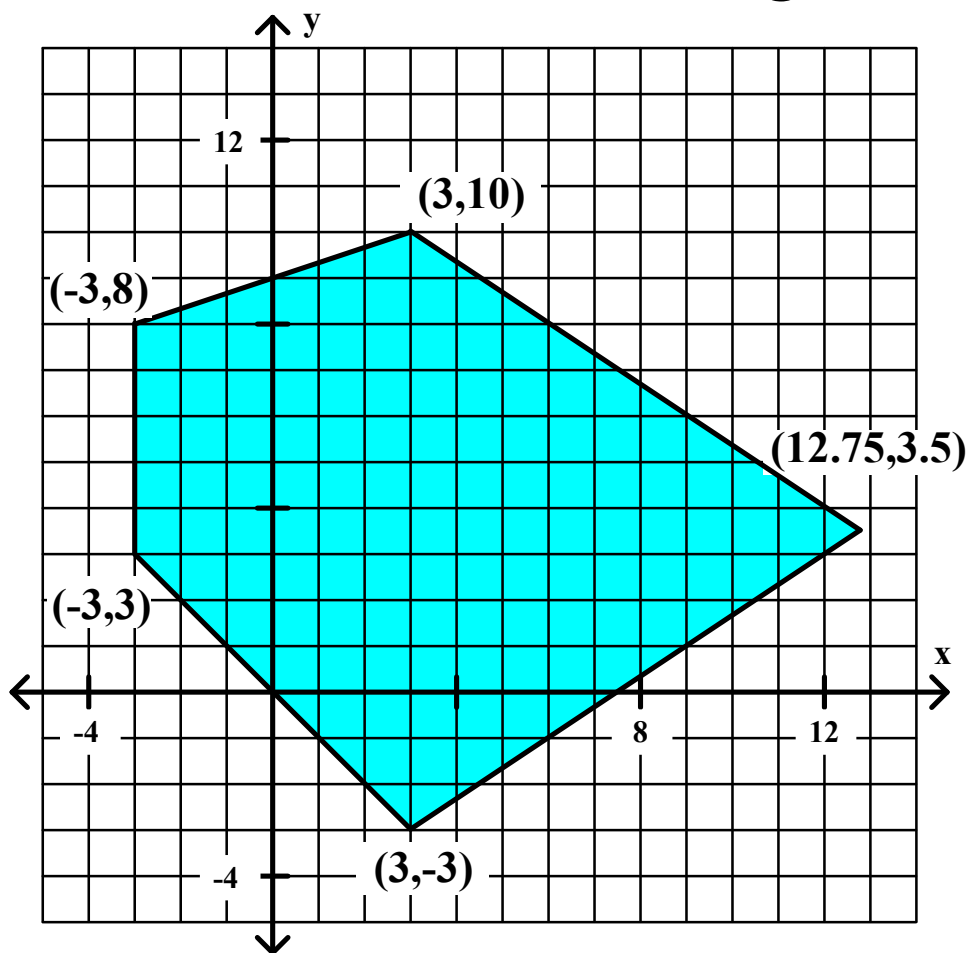
$$\text{At } (3, 10) \quad \implies \quad F = 3 + 20 = \mathbf{23}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -3 + 16 = \mathbf{13}$$

$$\text{At } (-3, 3) \quad \implies \quad F = -3 + 6 = \mathbf{3}$$

$$\text{At } (3, -3) \quad \implies \quad F = 3 + -6 = \mathbf{-3}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$5. \quad F = x + 2y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

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$$\text{At } (3, 10) \quad \Longrightarrow \quad F = 3 + 20 = \mathbf{23}$$

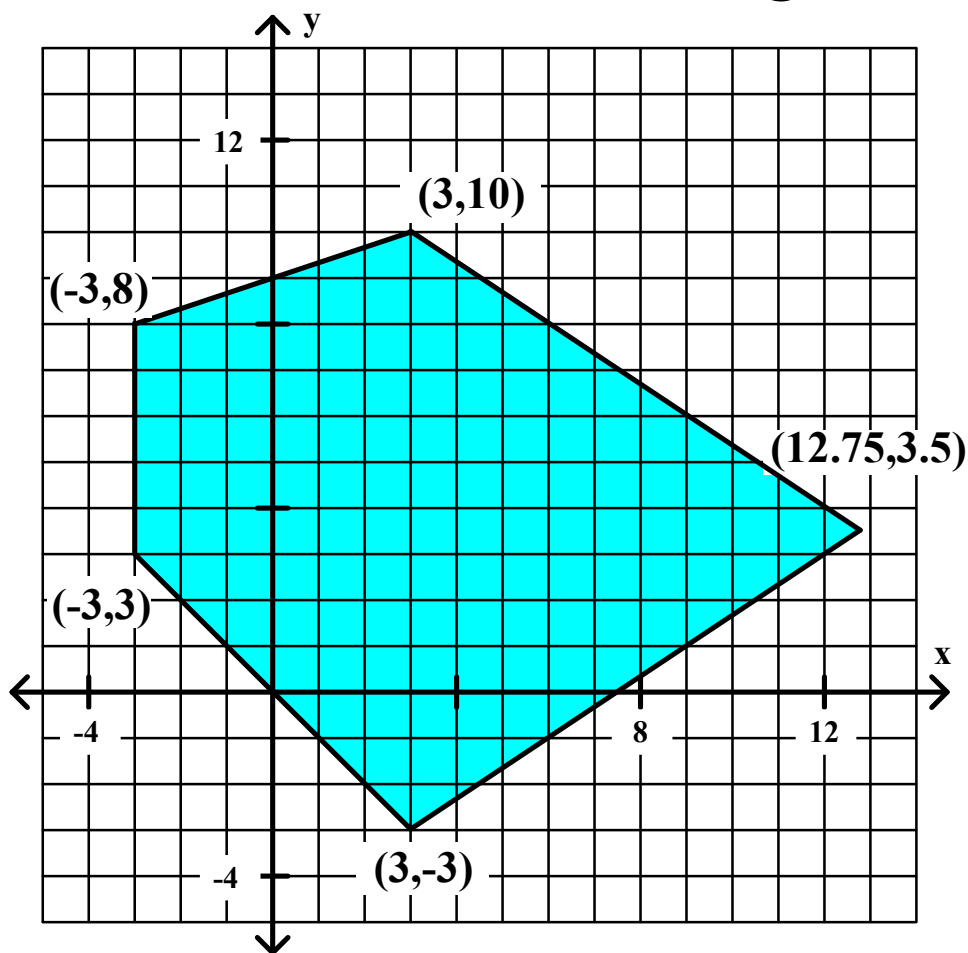
$$\text{At } (-3, 8) \quad \Longrightarrow \quad F = -3 + 16 = \mathbf{13}$$

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$$\text{At } (3, -3) \quad \Longrightarrow \quad F = 3 + -6 = \mathbf{-3}$$

$$\text{At } (12.75, 3.5) \quad \Longrightarrow \quad F = 12.75 + 7 = \mathbf{19.75}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$5. \quad F = x + 2y$$

$$F_{\max} = \underline{23} \quad \text{at} \quad \underline{(3,10)}$$

$$F_{\min} = \underline{\quad\quad\quad} \quad \text{at} \quad \underline{\quad\quad\quad}$$

$$\text{At } (3,10) \implies F = 3 + 20 = \mathbf{23}$$

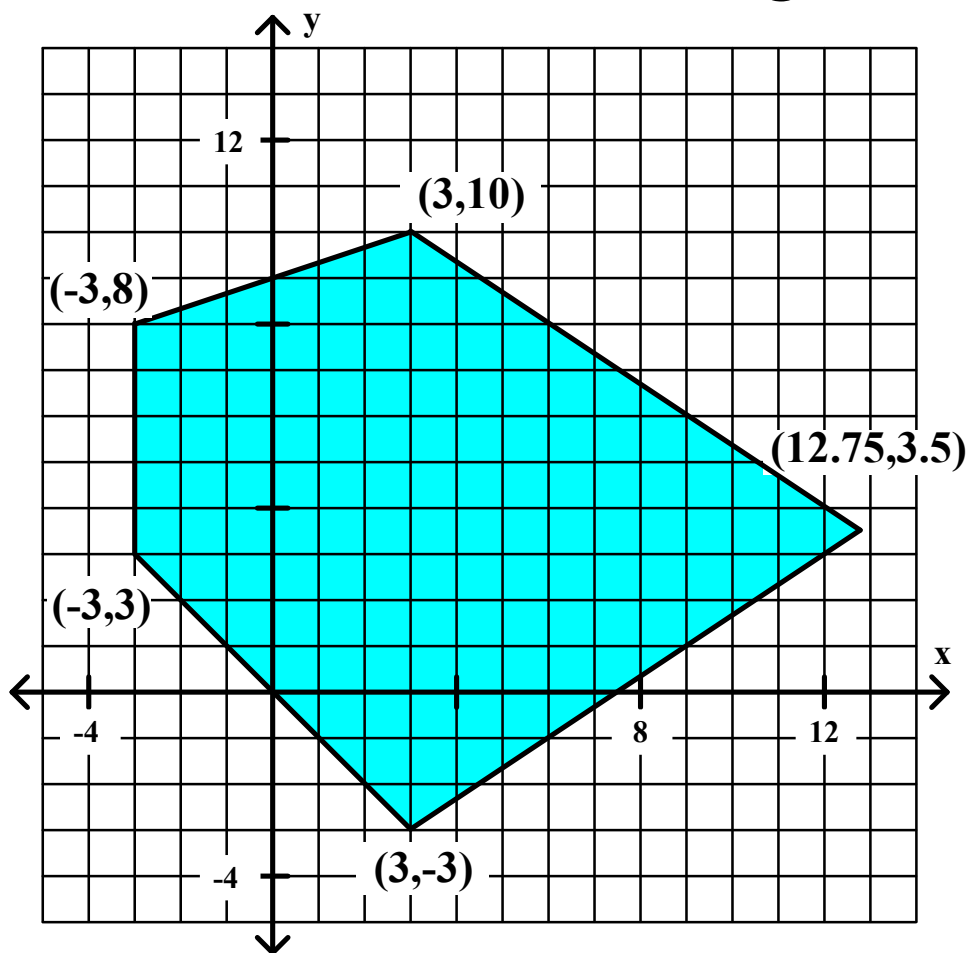
$$\text{At } (-3,8) \implies F = -3 + 16 = \mathbf{13}$$

$$\text{At } (-3,3) \implies F = -3 + 6 = \mathbf{3}$$

$$\text{At } (3,-3) \implies F = 3 + -6 = \mathbf{-3}$$

$$\text{At } (12.75,3.5) \implies F = 12.75 + 7 = \mathbf{19.75}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$5. \quad F = x + 2y$$

$$F_{\max} = \underline{23} \quad \text{at} \quad \underline{(3,10)}$$

$$F_{\min} = \underline{-3} \quad \text{at} \quad \underline{(3,-3)}$$

$$\text{At } (3,10) \implies F = 3 + 20 = \mathbf{23}$$

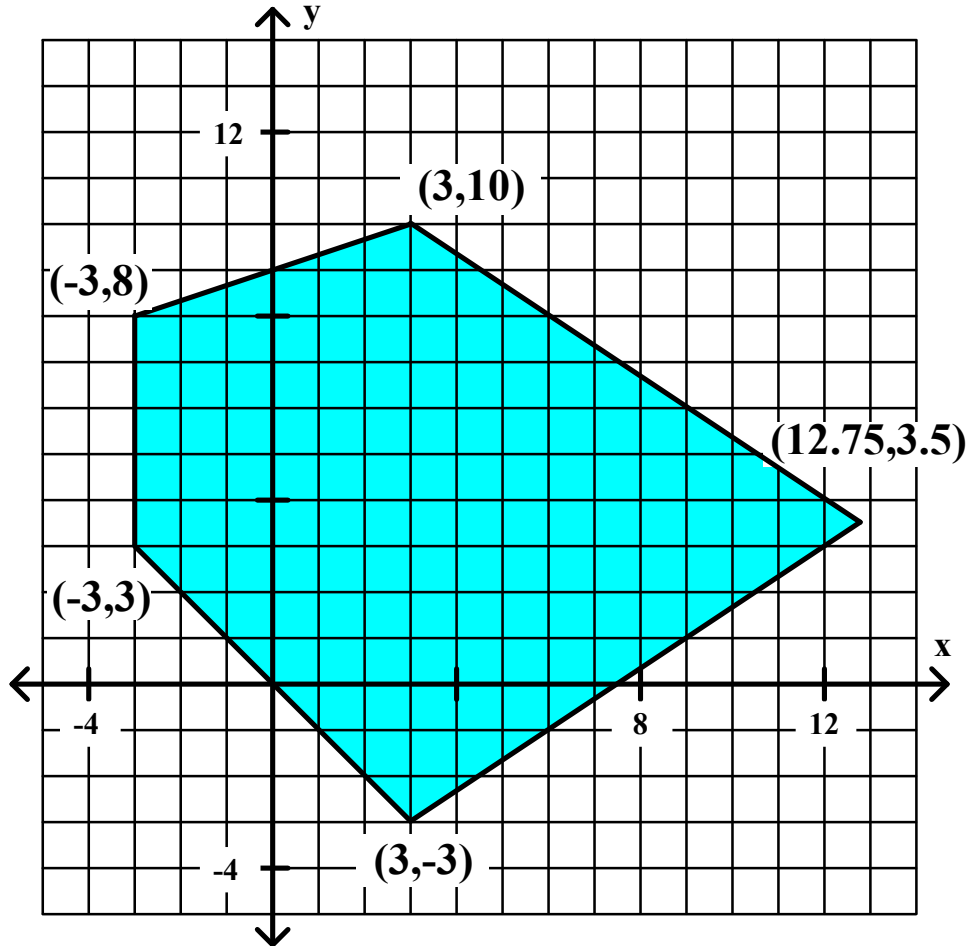
$$\text{At } (-3,8) \implies F = -3 + 16 = \mathbf{13}$$

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$$\text{At } (12.75,3.5) \implies F = 12.75 + 7 = \mathbf{19.75}$$

General Algebra II CWS #1 Unit 5



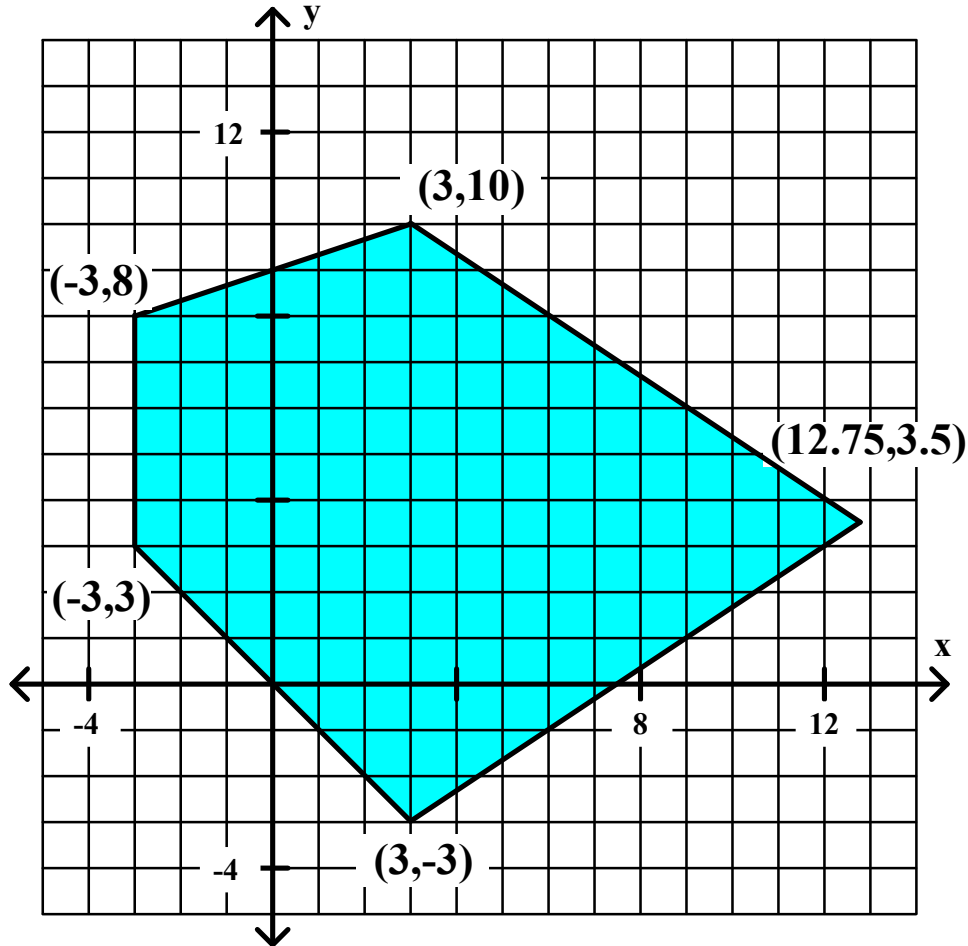
The **maximum** and the **minimum** values of F will occur at a vertex of the region.

6. $F = 3x + 5y$

$F_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

$F_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

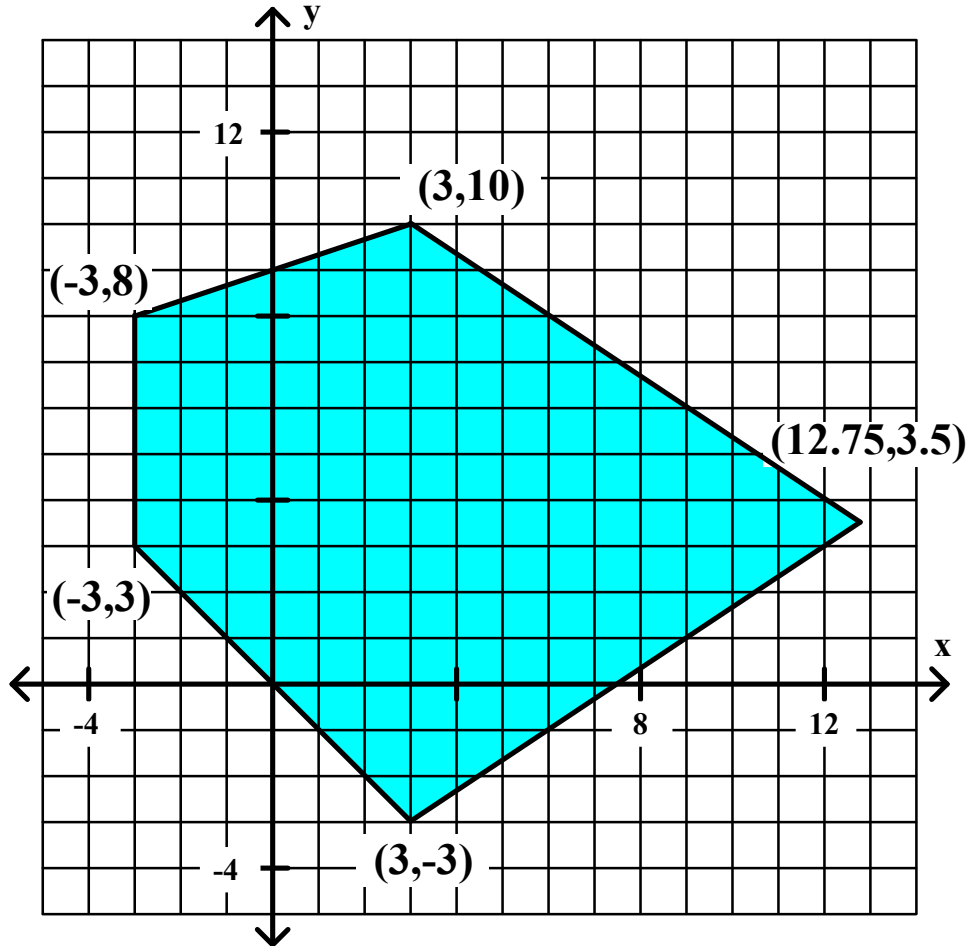
6. $F = 3x + 5y$

$F_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

$F_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

At (3,10) $\implies F = 9 + 50 = \mathbf{-41}$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$6. \quad F = 3x + 5y$$

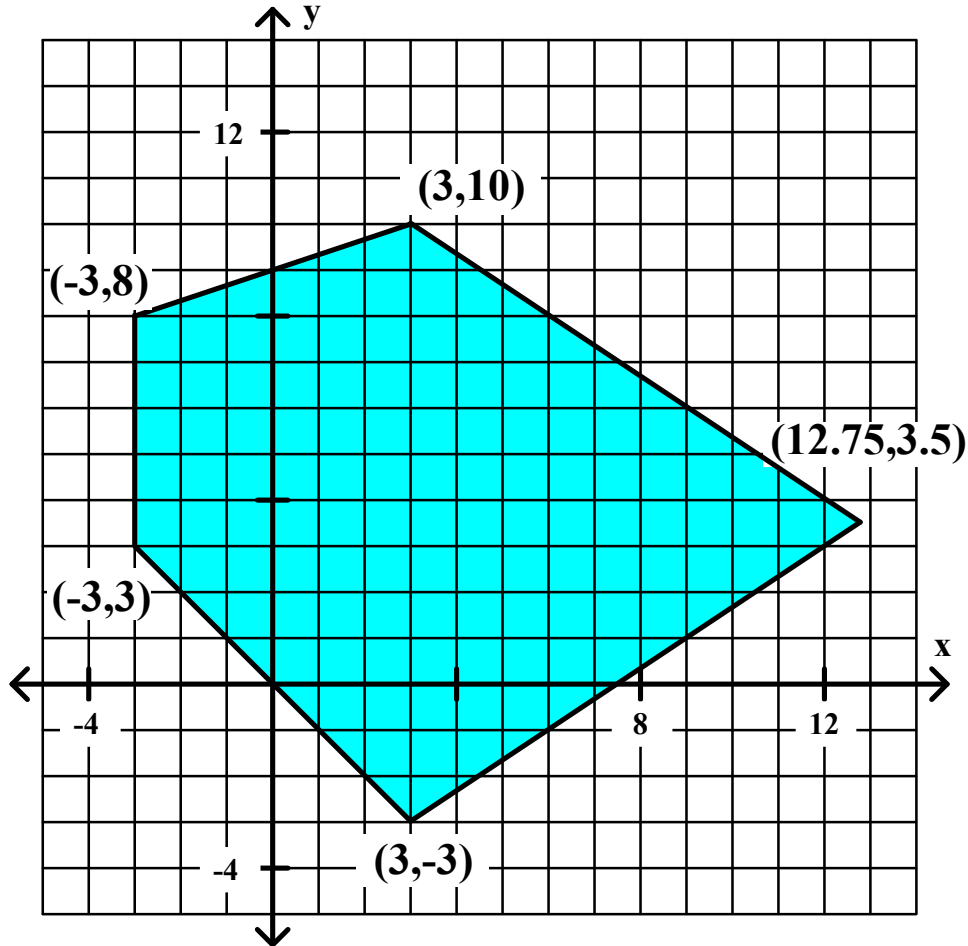
$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \implies \quad F = 9 + 50 = \mathbf{-41}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -9 + 40 = \mathbf{-49}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$6. \quad F = 3x + 5y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

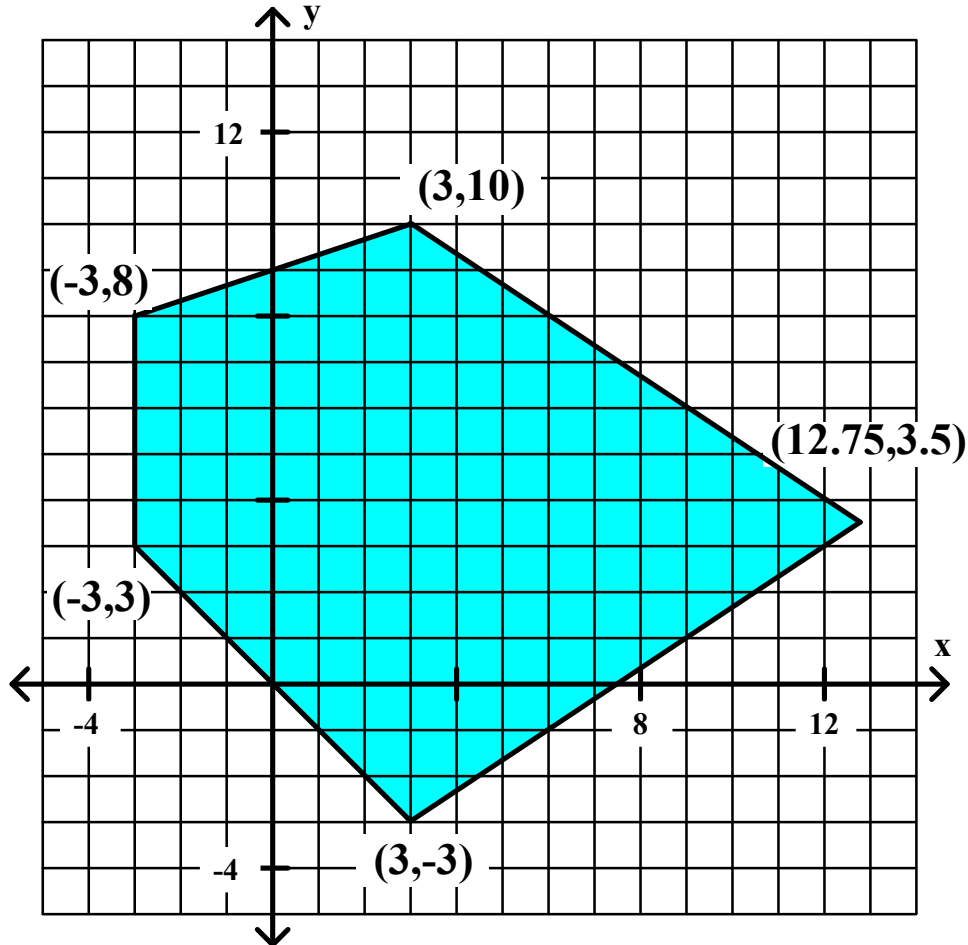
$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \implies \quad F = 9 + 50 = \mathbf{-41}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -9 + 40 = \mathbf{-49}$$

$$\text{At } (-3, 3) \quad \implies \quad F = -9 + 15 = \mathbf{-24}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$6. \quad F = 3x + 5y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

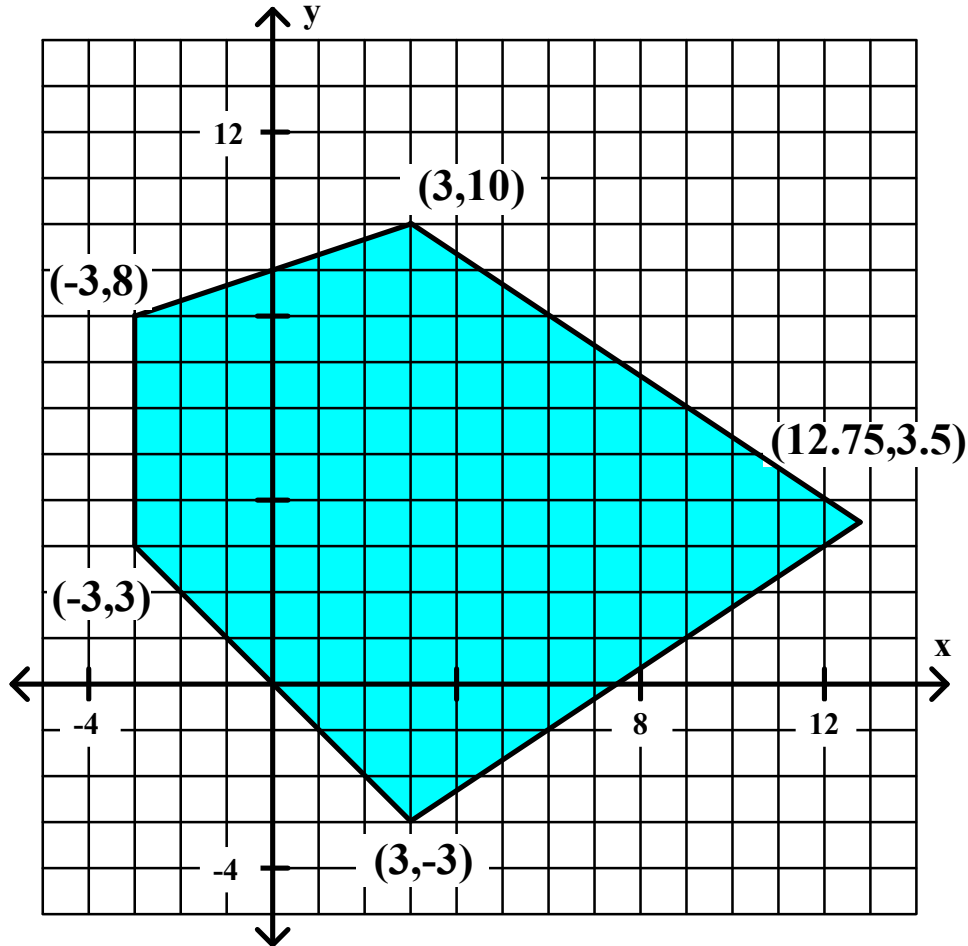
$$\text{At } (3, 10) \quad \implies \quad F = 9 + 50 = \mathbf{-41}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -9 + 40 = \mathbf{-49}$$

$$\text{At } (-3, 3) \quad \implies \quad F = -9 + 15 = \mathbf{-24}$$

$$\text{At } (3, -3) \quad \implies \quad F = 9 - 15 = \mathbf{24}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$6. \quad F = 3x + 5y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \Longrightarrow \quad F = 9 + 50 = \mathbf{-41}$$

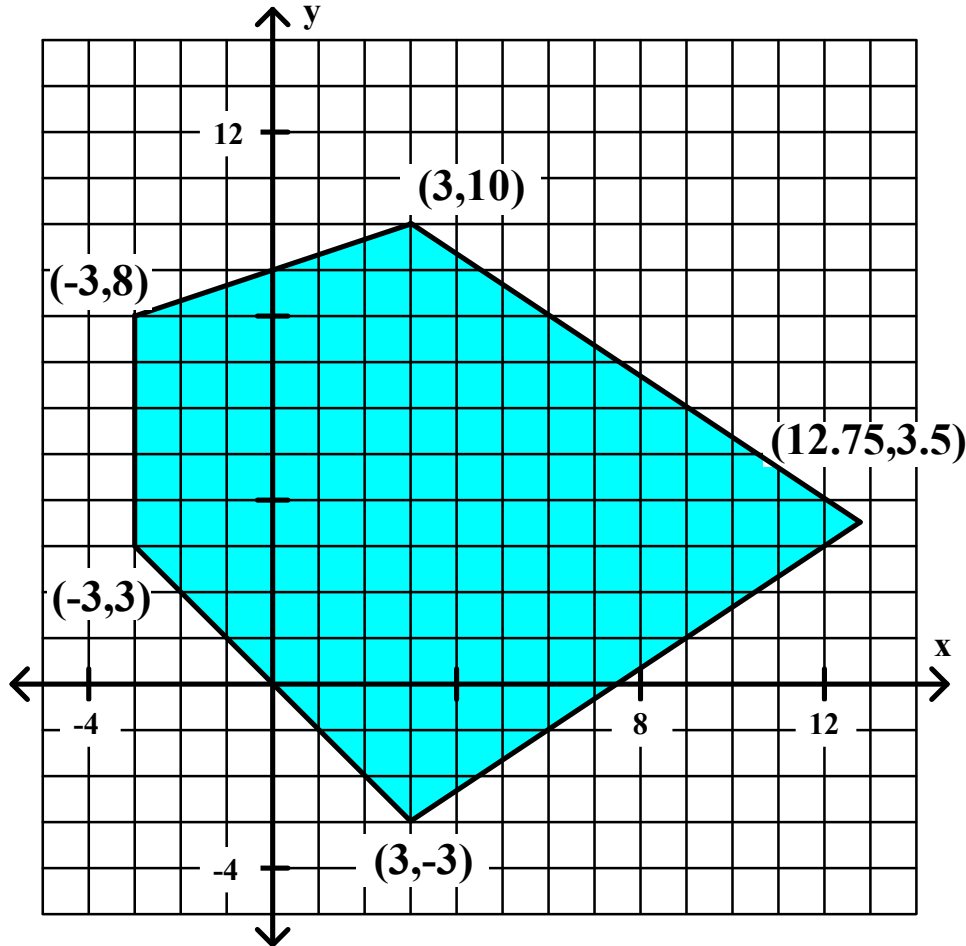
$$\text{At } (-3, 8) \quad \Longrightarrow \quad F = -9 + 40 = \mathbf{-49}$$

$$\text{At } (-3, 3) \quad \Longrightarrow \quad F = -9 + 15 = \mathbf{-24}$$

$$\text{At } (3, -3) \quad \Longrightarrow \quad F = 9 + -15 = \mathbf{24}$$

$$\text{At } (12.75, 3.5) \quad \Longrightarrow \quad F = 38.25 + 17.5 = \mathbf{20.75}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$6. \quad F = 3x + 5y$$

$$F_{\max} = \underline{24} \quad \text{at} \quad \underline{(3, -3)}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \implies F = 9 + 50 = \mathbf{-41}$$

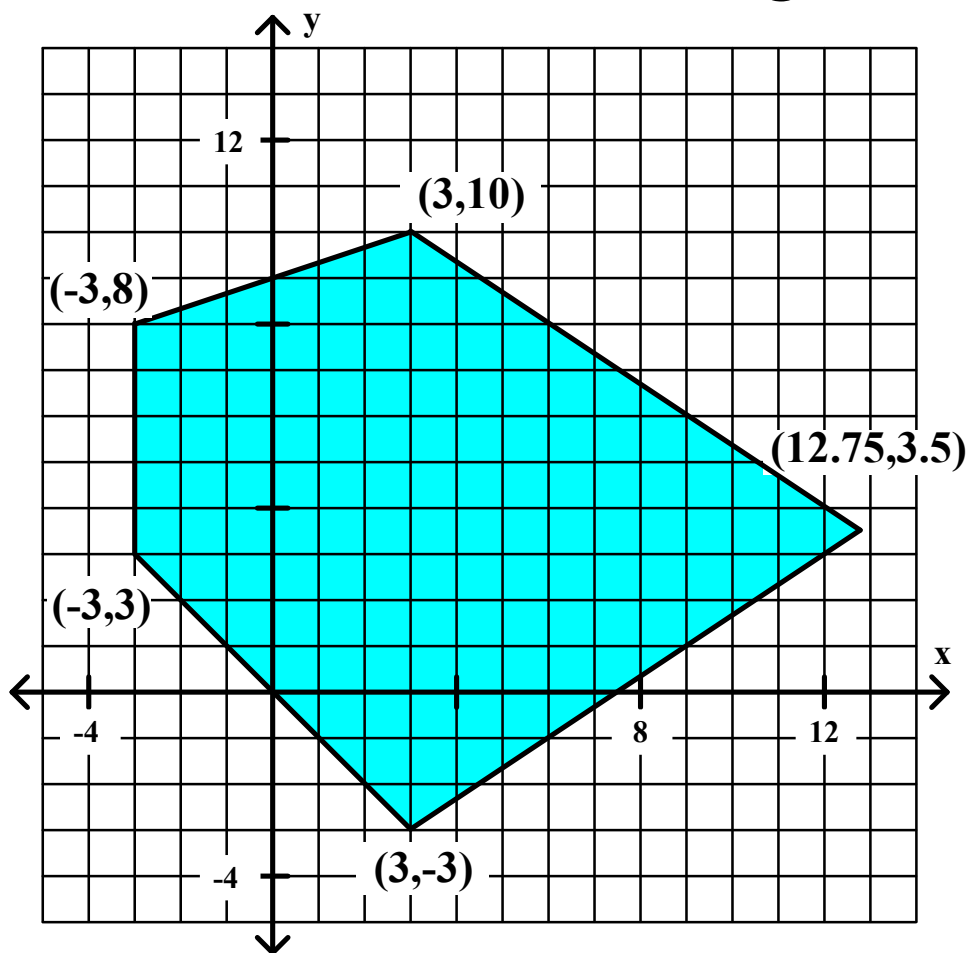
$$\text{At } (-3, 8) \implies F = -9 + 40 = \mathbf{-49}$$

$$\text{At } (-3, 3) \implies F = -9 + 15 = \mathbf{-24}$$

$$\text{At } (3, -3) \implies F = 9 + (-15) = \mathbf{24}$$

$$\text{At } (12.75, 3.5) \implies F = 38.25 + 17.5 = \mathbf{20.75}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$6. \quad F = 3x + 5y$$

$$F_{\max} = \underline{24} \quad \text{at} \quad \underline{(3,-3)}$$

$$F_{\min} = \underline{-49} \quad \text{at} \quad \underline{(-3,8)}$$

$$\text{At } (3,10) \implies F = 9 + 50 = -41$$

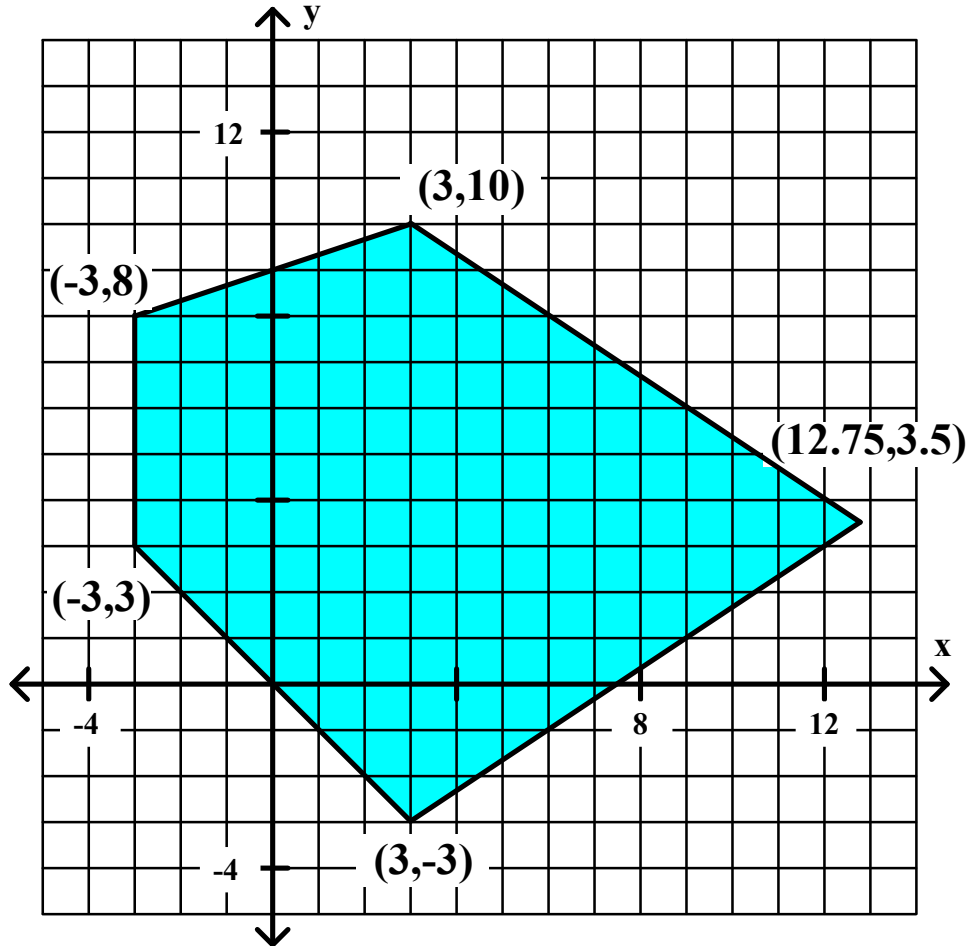
$$\text{At } (-3,8) \implies F = -9 + 40 = -49$$

$$\text{At } (-3,3) \implies F = -9 + 15 = -24$$

$$\text{At } (3,-3) \implies F = 9 + (-15) = 24$$

$$\text{At } (12.75,3.5) \implies F = 38.25 + 17.5 = 20.75$$

General Algebra II CWS #1 Unit 5



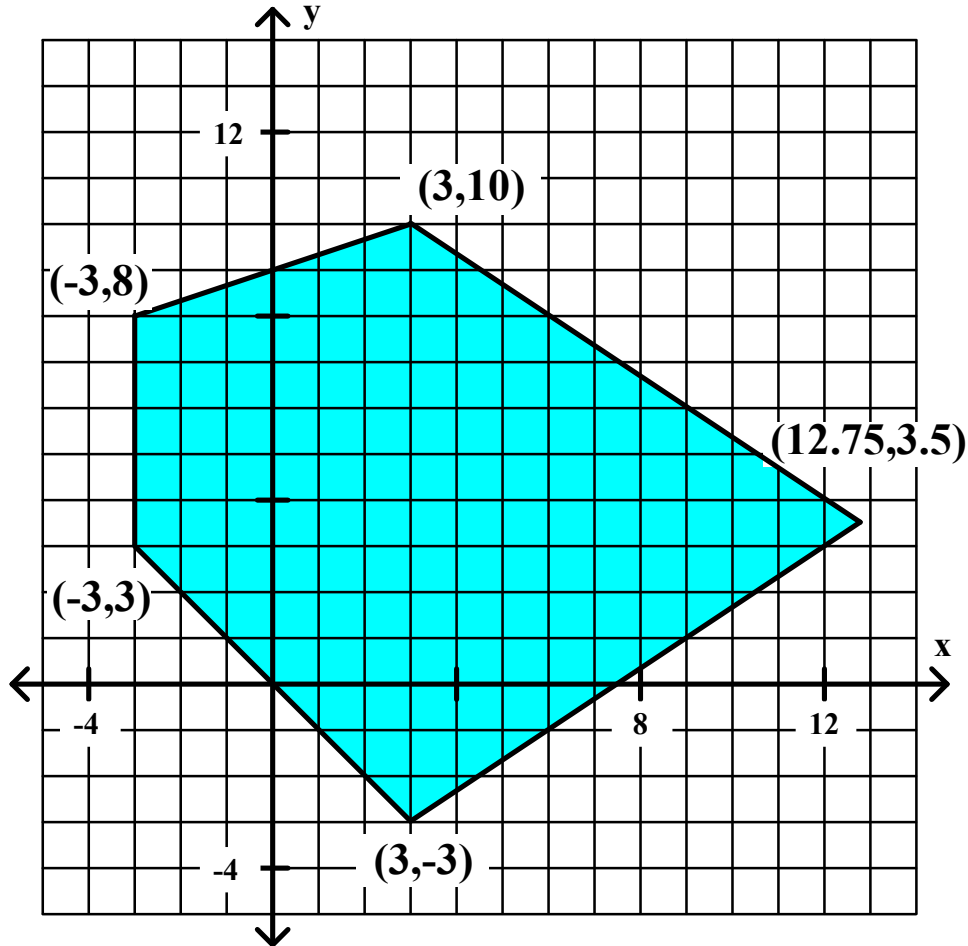
The **maximum** and the **minimum** values of F will occur at a vertex of the region.

7. $F = 3x + y$

$F_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

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General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

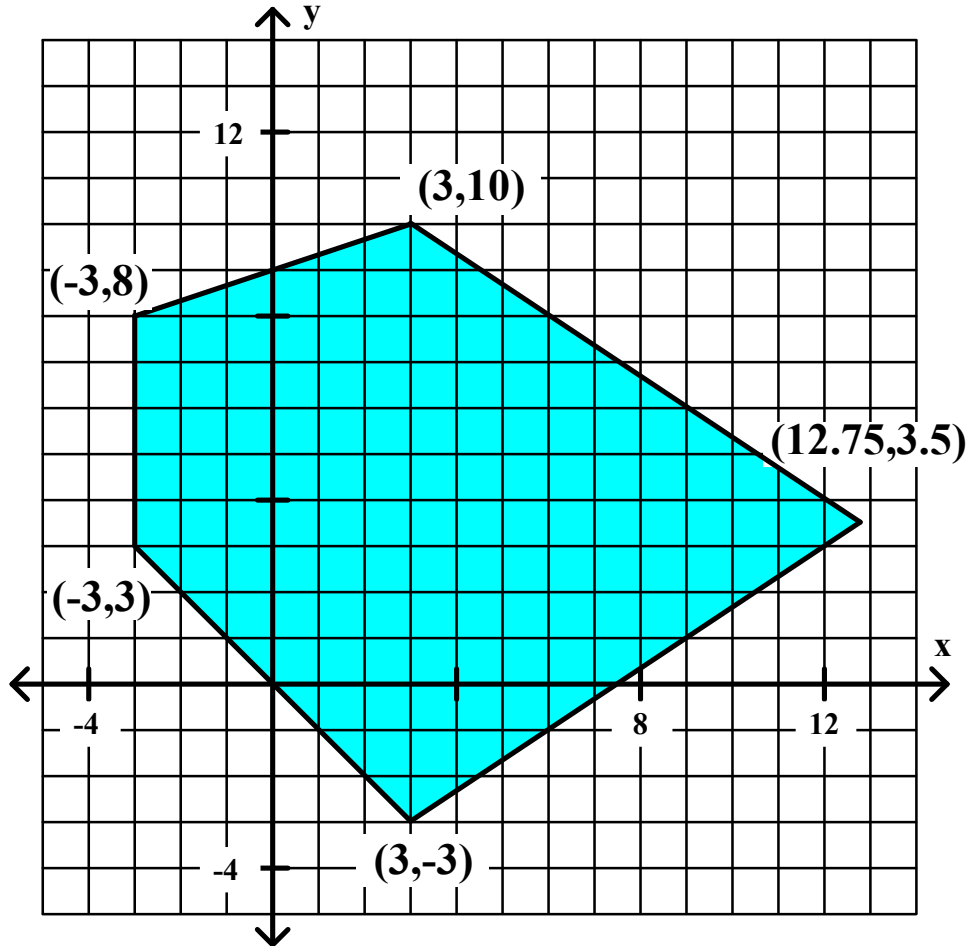
$$7. \quad F = 3x + y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \implies \quad F = 9 + 10 = \mathbf{19}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$7. \quad F = 3x + y$$

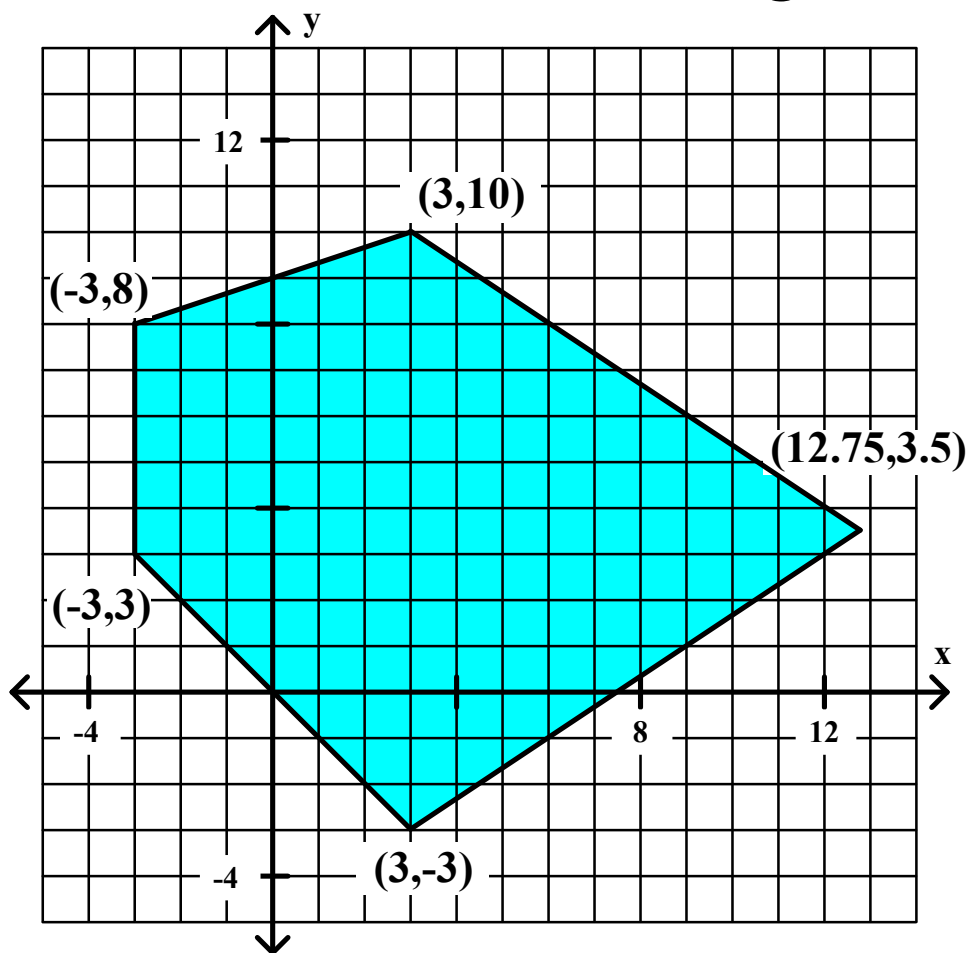
$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \implies \quad F = 9 + 10 = \mathbf{19}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -9 + 8 = \mathbf{-1}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$7. \quad F = 3x + y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

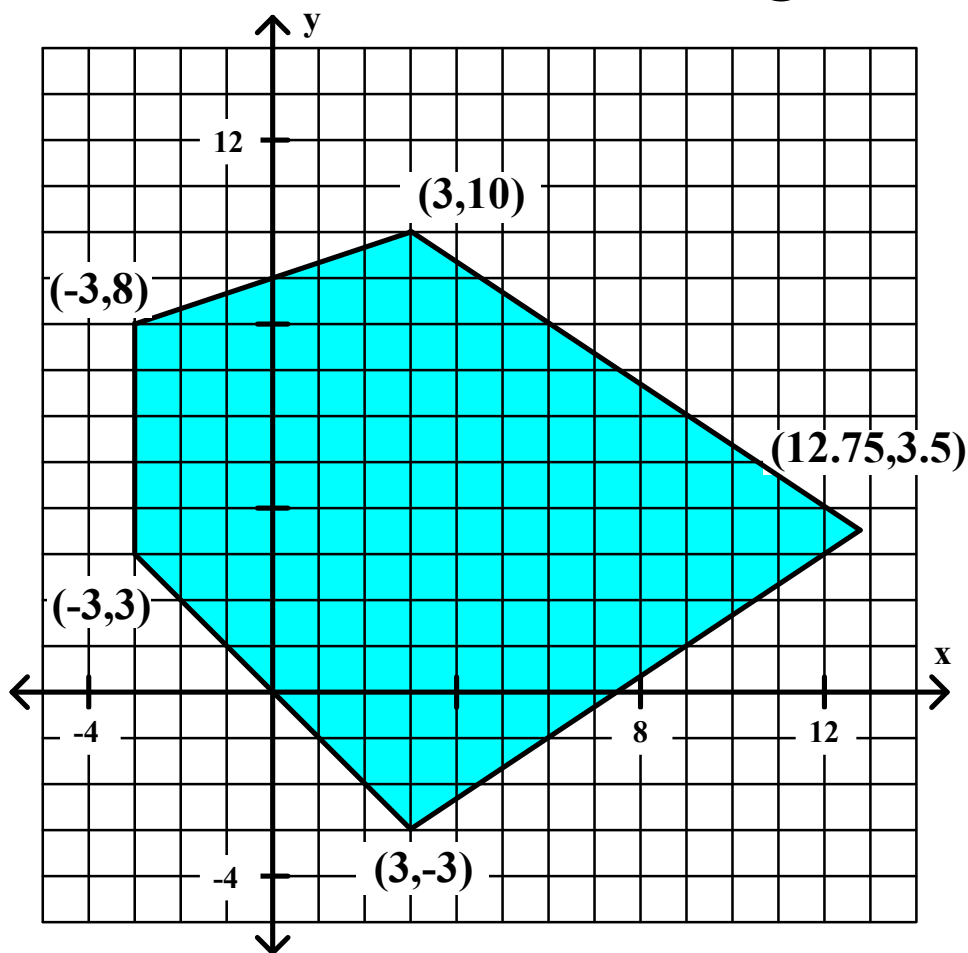
$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \implies \quad F = 9 + 10 = \mathbf{19}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -9 + 8 = \mathbf{-1}$$

$$\text{At } (-3, 3) \quad \implies \quad F = -9 + 3 = \mathbf{-6}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$7. \quad F = 3x + y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

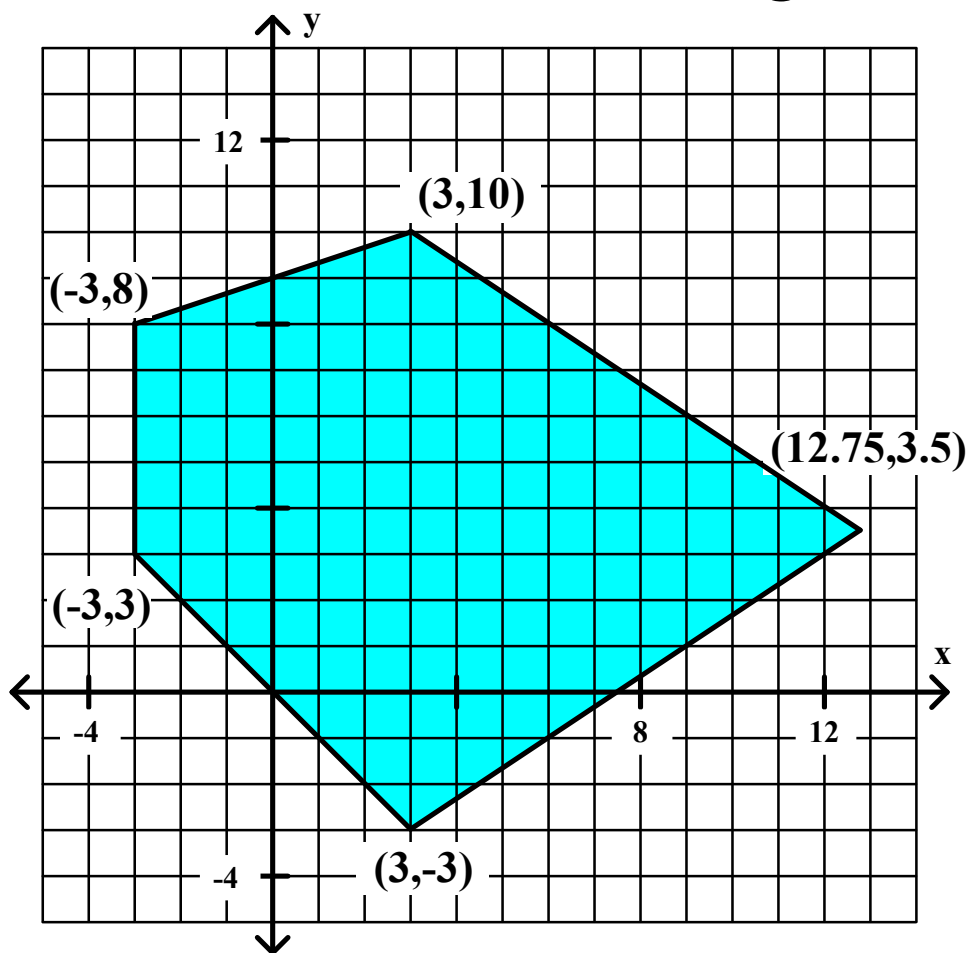
$$\text{At } (3, 10) \quad \implies \quad F = 9 + 10 = \mathbf{19}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -9 + 8 = \mathbf{-1}$$

$$\text{At } (-3, 3) \quad \implies \quad F = -9 + 3 = \mathbf{-6}$$

$$\text{At } (3, -3) \quad \implies \quad F = 9 + -3 = \mathbf{6}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$7. \quad F = 3x + y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \Longrightarrow \quad F = 9 + 10 = \mathbf{19}$$

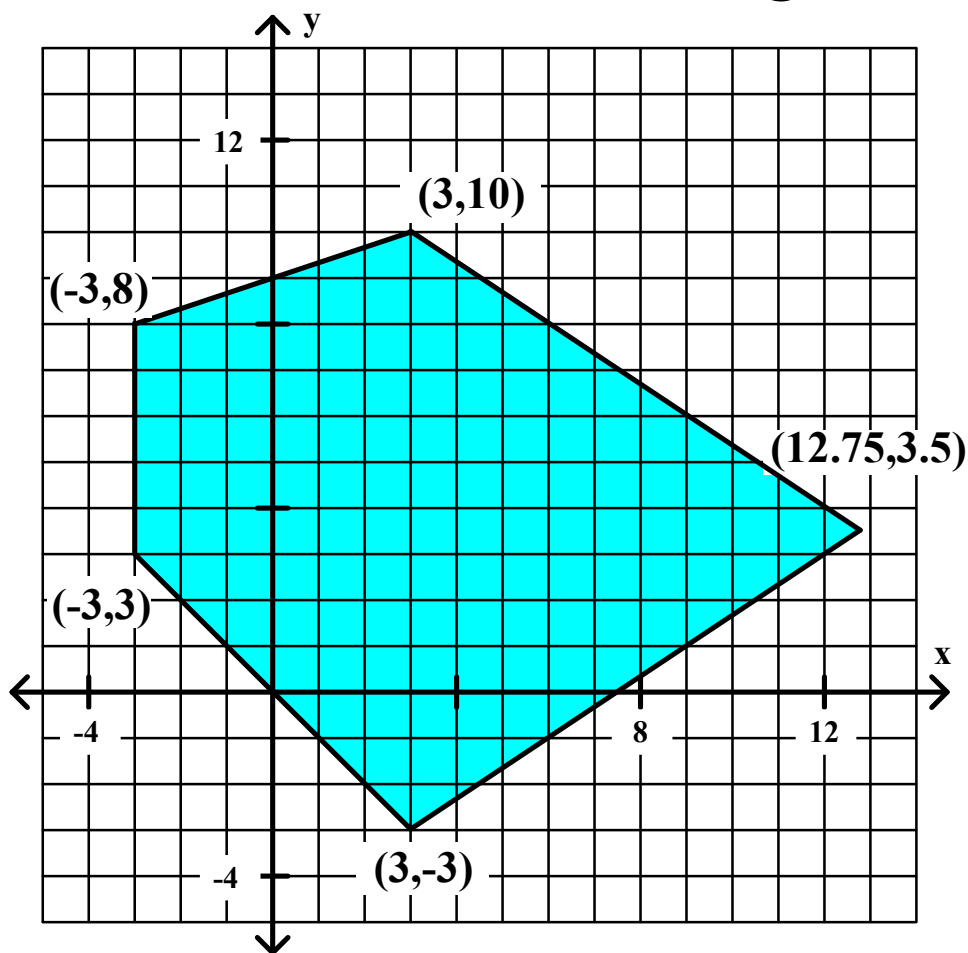
$$\text{At } (-3, 8) \quad \Longrightarrow \quad F = -9 + 8 = \mathbf{-1}$$

$$\text{At } (-3, 3) \quad \Longrightarrow \quad F = -9 + 3 = \mathbf{-6}$$

$$\text{At } (3, -3) \quad \Longrightarrow \quad F = 9 + -3 = \mathbf{6}$$

$$\text{At } (12.75, 3.5) \quad \Longrightarrow \quad F = 38.25 + 3.5 = \mathbf{41.75}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$7. \quad F = 3x + y$$

$$F_{\max} = \underline{41.75} \quad \text{at} \quad (\underline{12.75, 3.5})$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \Longrightarrow \quad F = 9 + 10 = \mathbf{19}$$

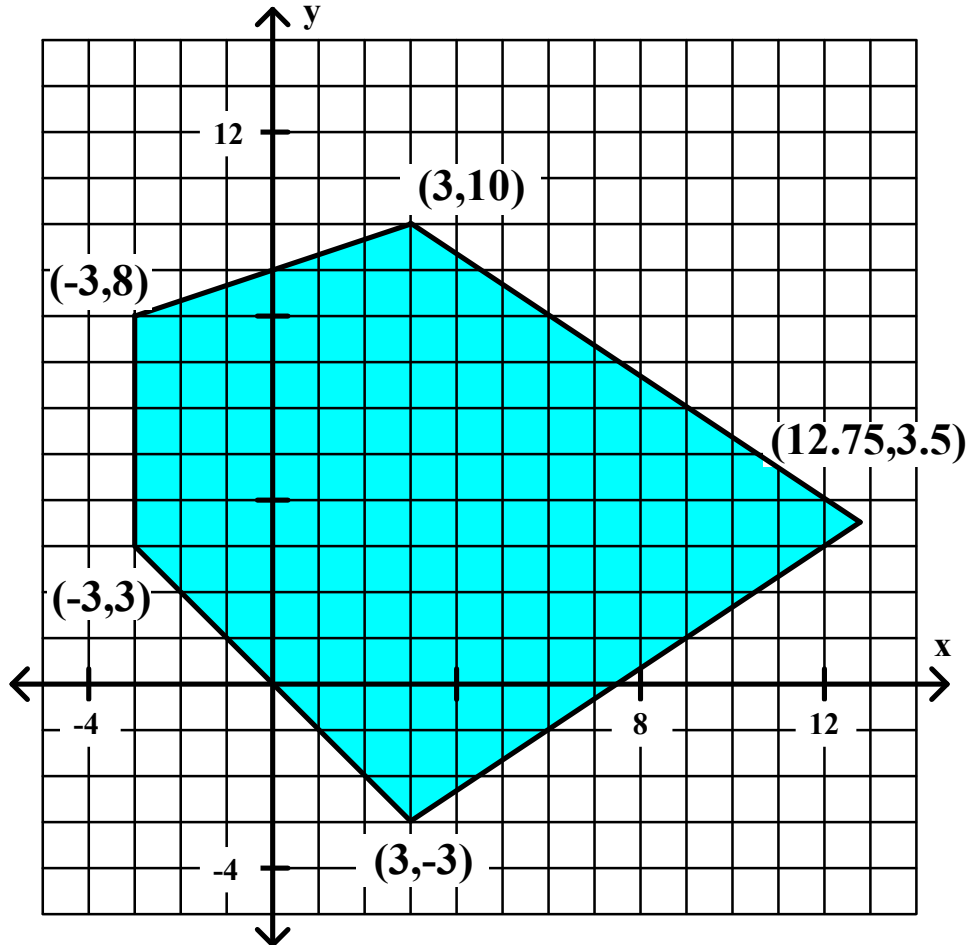
$$\text{At } (-3, 8) \quad \Longrightarrow \quad F = -9 + 8 = \mathbf{-1}$$

$$\text{At } (-3, 3) \quad \Longrightarrow \quad F = -9 + 3 = \mathbf{-6}$$

$$\text{At } (3, -3) \quad \Longrightarrow \quad F = 9 + -3 = \mathbf{6}$$

$$\text{At } (12.75, 3.5) \quad \Longrightarrow \quad F = 38.25 + 3.5 = \mathbf{41.75}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$7. \quad F = 3x + y$$

$$F_{\max} = \underline{41.75} \quad \text{at} \quad \underline{(12.75, 3.5)}$$

$$F_{\min} = \underline{-6} \quad \text{at} \quad \underline{(-3, 3)}$$

$$\text{At } (3, 10) \quad \Longrightarrow \quad F = 9 + 10 = \mathbf{19}$$

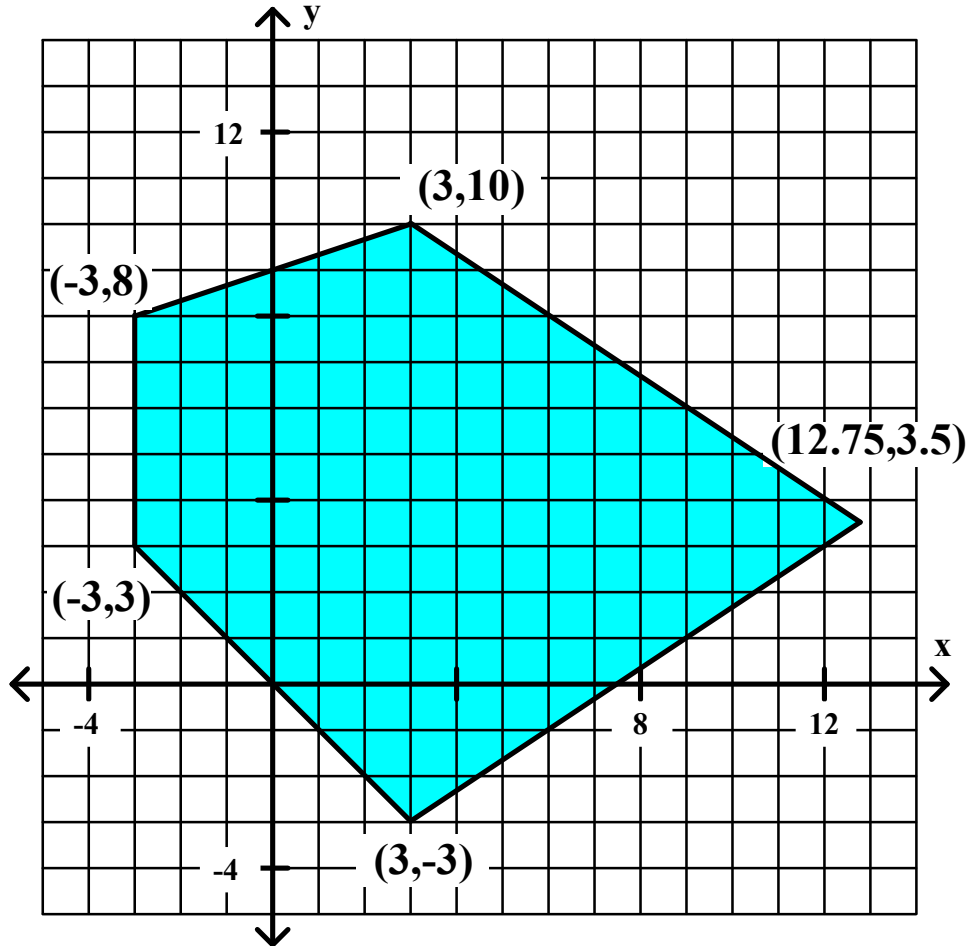
$$\text{At } (-3, 8) \quad \Longrightarrow \quad F = -9 + 8 = \mathbf{-1}$$

$$\text{At } (-3, 3) \quad \Longrightarrow \quad F = -9 + 3 = \mathbf{-6}$$

$$\text{At } (3, -3) \quad \Longrightarrow \quad F = 9 + -3 = \mathbf{6}$$

$$\text{At } (12.75, 3.5) \quad \Longrightarrow \quad F = 38.25 + 3.5 = \mathbf{41.75}$$

General Algebra II CWS #1 Unit 5



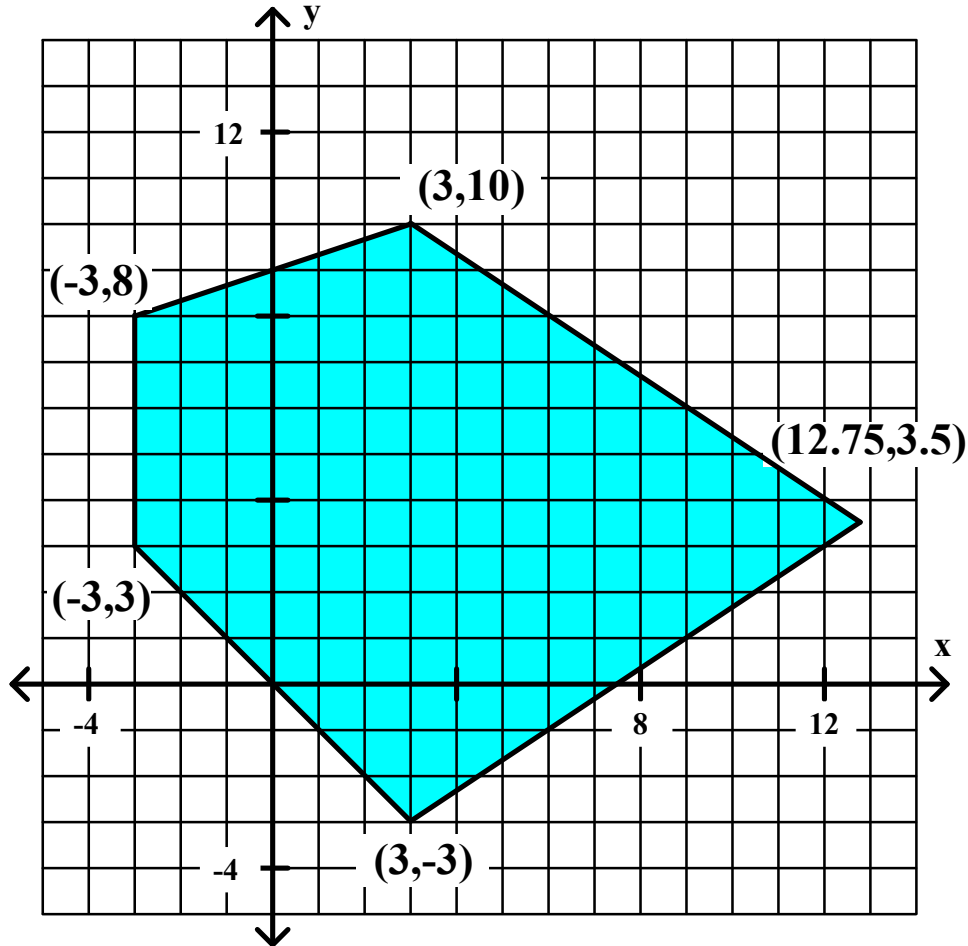
The **maximum** and the **minimum** values of F will occur at a vertex of the region.

8. $F = 4x + 2y$

$F_{\max} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

$F_{\min} = \underline{\hspace{2cm}}$ at $\underline{\hspace{2cm}}$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

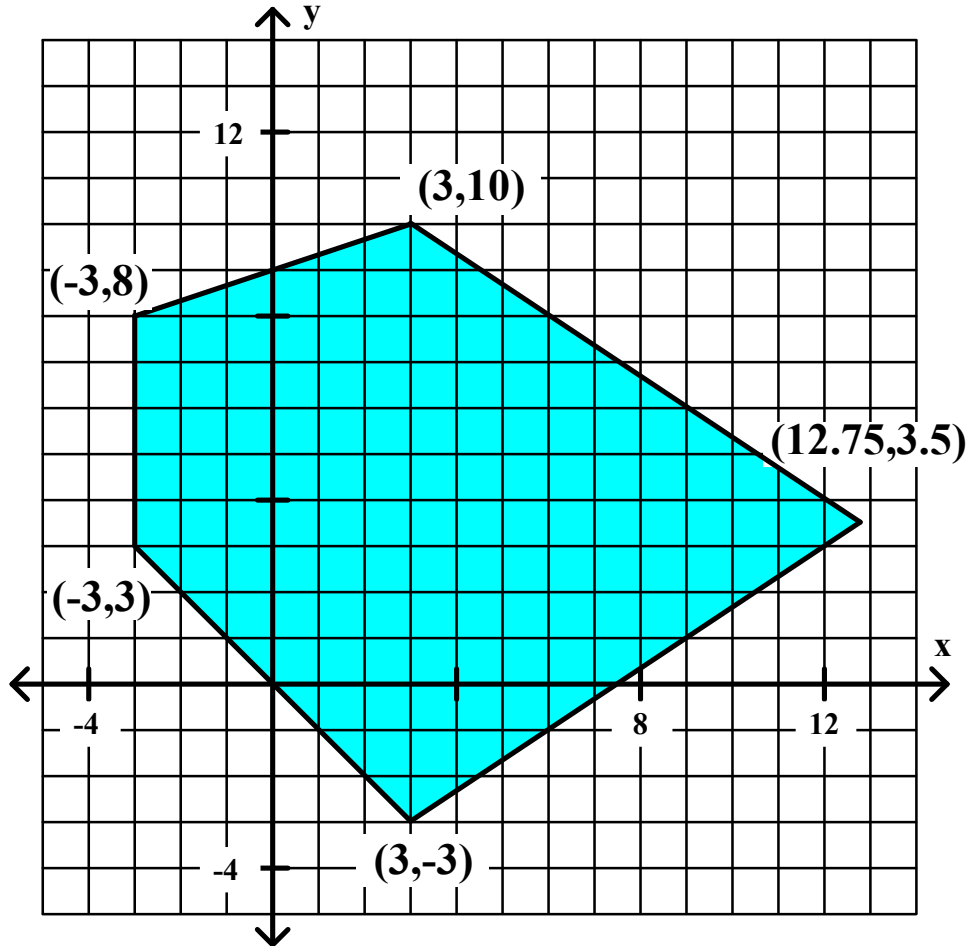
$$8. \quad F = 4x + 2y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \implies F = 4(3) + 2(10) = 12 + 20 = \mathbf{-8}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$8. \quad F = 4x + 2y$$

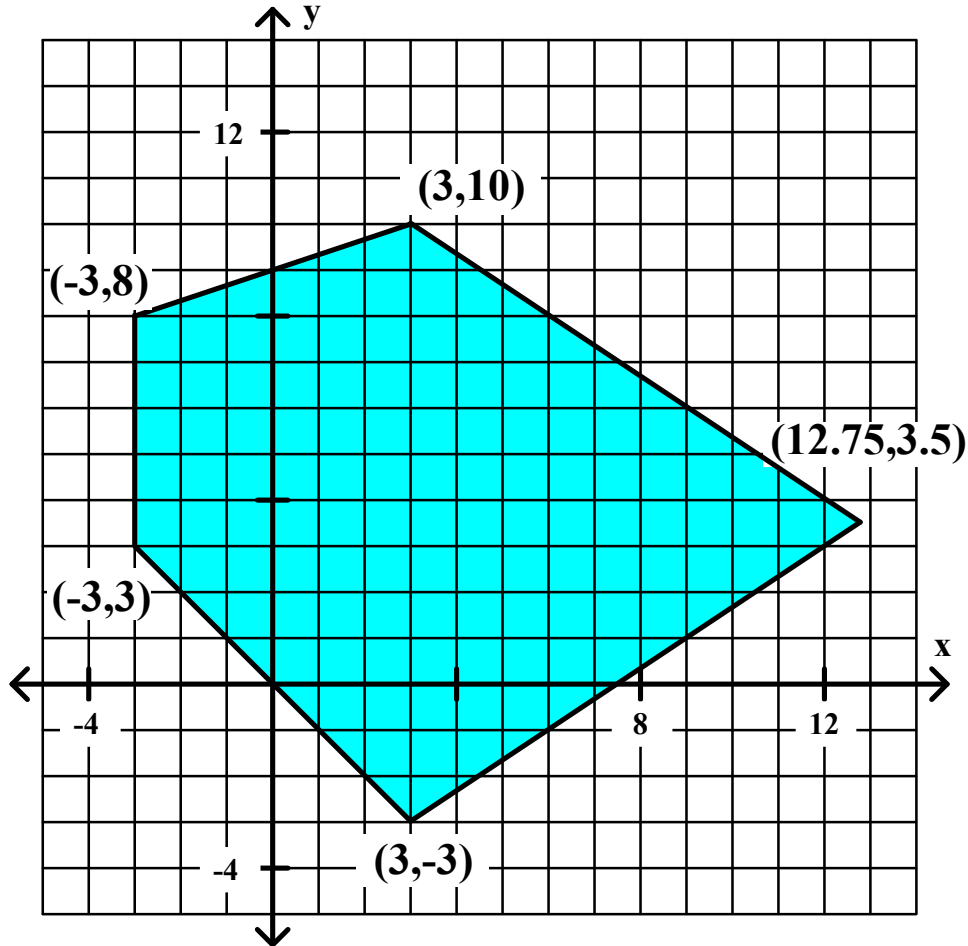
$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \implies \quad F = 12 + 20 = \mathbf{-8}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -12 + 16 = \mathbf{-28}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$8. \quad F = 4x + 2y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

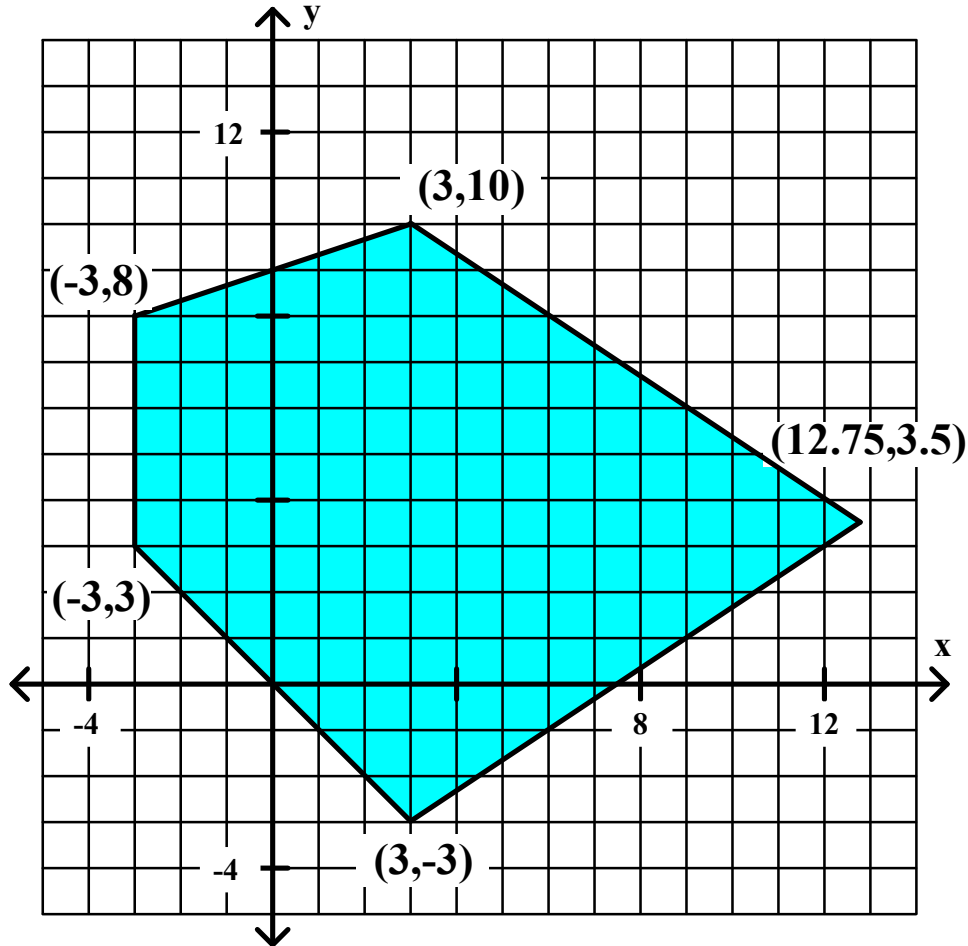
$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \quad \implies \quad F = 12 + 20 = \mathbf{-8}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -12 + 16 = \mathbf{-28}$$

$$\text{At } (-3, 3) \quad \implies \quad F = -12 + 6 = \mathbf{-18}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$8. \quad F = 4x + 2y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

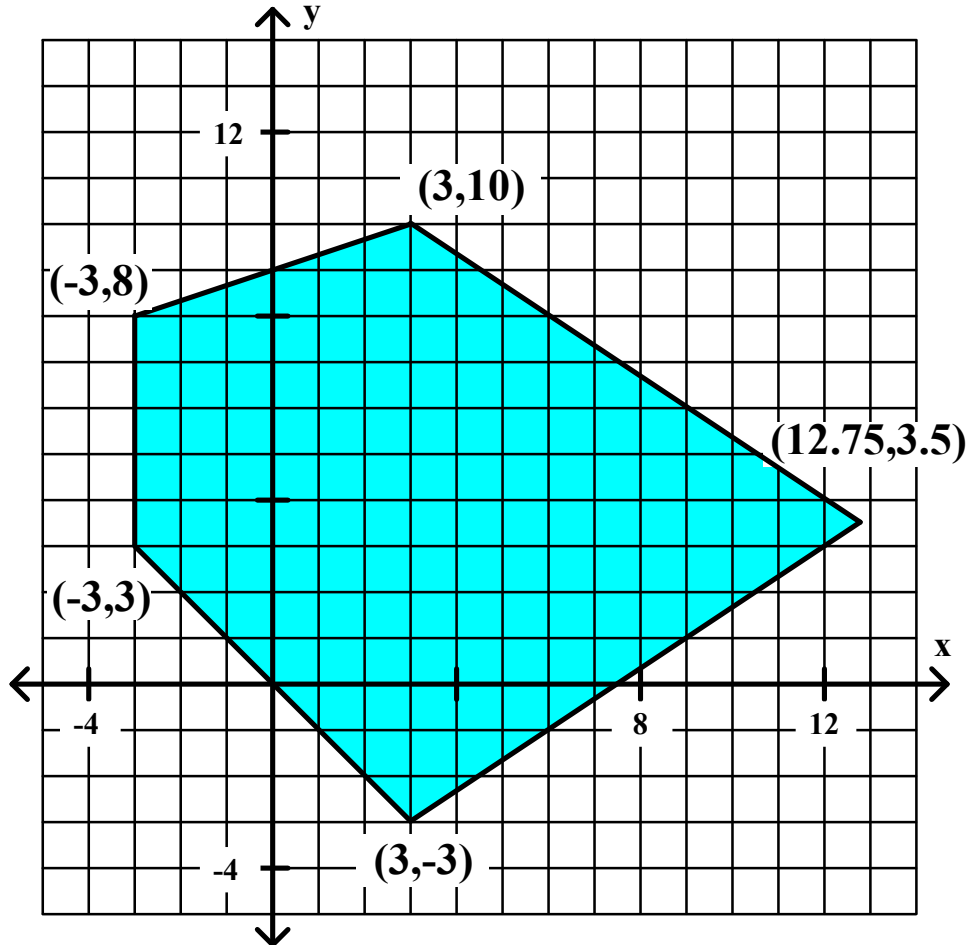
$$\text{At } (3, 10) \quad \implies \quad F = 12 + 20 = \mathbf{-8}$$

$$\text{At } (-3, 8) \quad \implies \quad F = -12 + 16 = \mathbf{-28}$$

$$\text{At } (-3, 3) \quad \implies \quad F = -12 + 6 = \mathbf{-18}$$

$$\text{At } (3, -3) \quad \implies \quad F = 12 - 6 = \mathbf{18}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$8. \quad F = 4x + 2y$$

$$F_{\max} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at} \quad \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \implies F = 12 + 20 = \mathbf{-8}$$

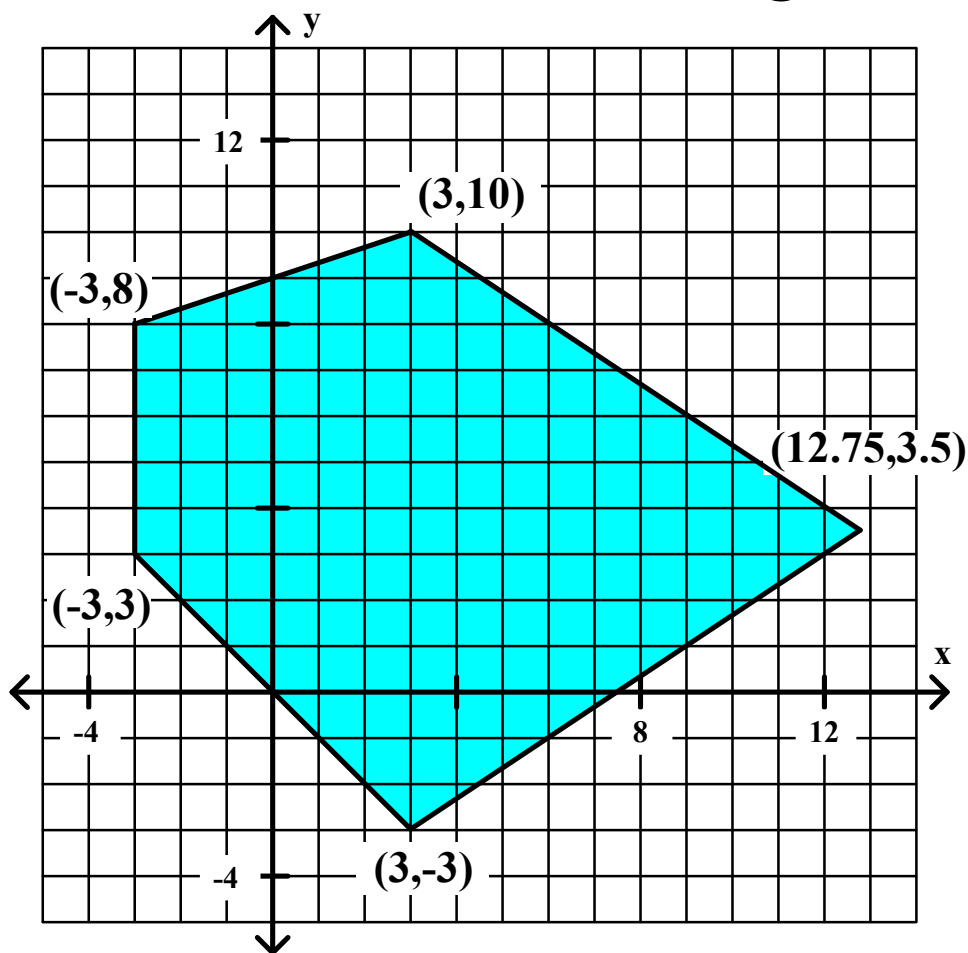
$$\text{At } (-3, 8) \implies F = -12 + 16 = \mathbf{-28}$$

$$\text{At } (-3, 3) \implies F = -12 + 6 = \mathbf{-18}$$

$$\text{At } (3, -3) \implies F = 12 - 6 = \mathbf{18}$$

$$\text{At } (12.75, 3.5) \implies F = 51 + 7 = \mathbf{44}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$8. \quad F = 4x + 2y$$

$$F_{\max} = \underline{44} \quad \text{at } \underline{(12.75, 3.5)}$$

$$F_{\min} = \underline{\hspace{2cm}} \quad \text{at } \underline{\hspace{2cm}}$$

$$\text{At } (3, 10) \implies F = 12 + 20 = \mathbf{-8}$$

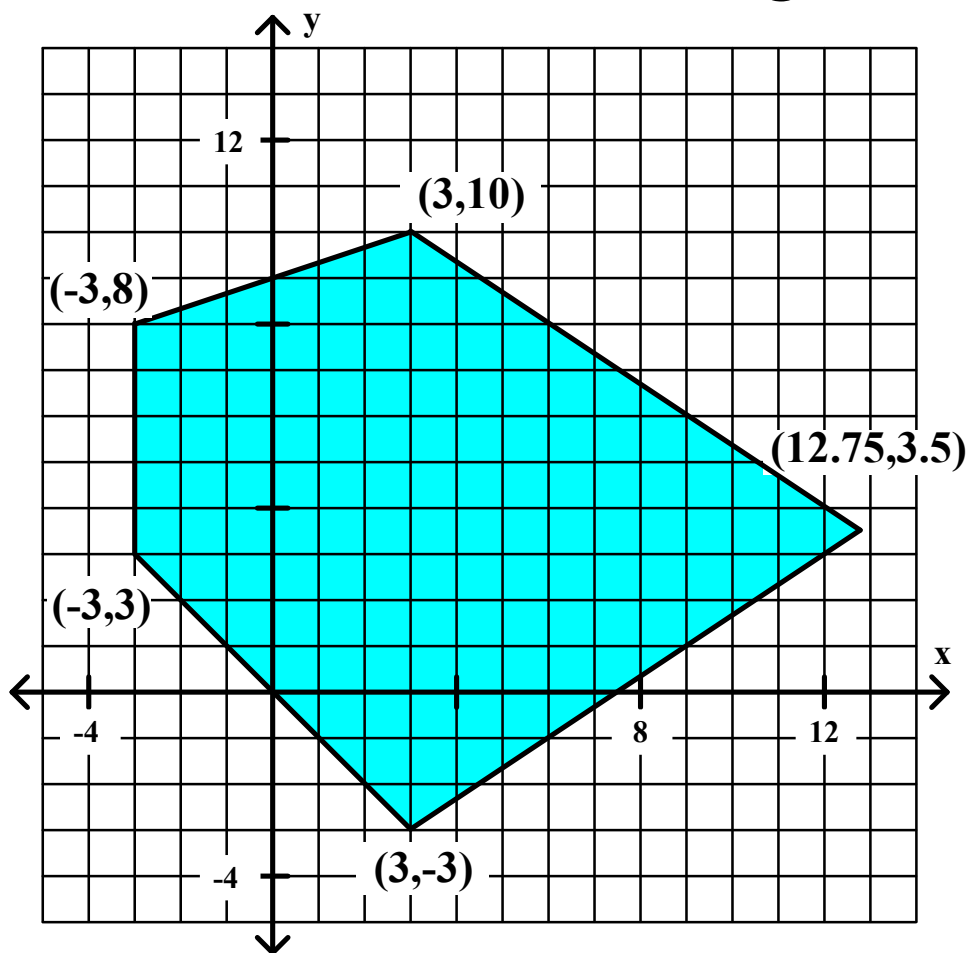
$$\text{At } (-3, 8) \implies F = -12 + 16 = \mathbf{-28}$$

$$\text{At } (-3, 3) \implies F = -12 + 6 = \mathbf{-18}$$

$$\text{At } (3, -3) \implies F = 12 - 6 = \mathbf{18}$$

$$\text{At } (12.75, 3.5) \implies F = 51 + 7 = \mathbf{44}$$

General Algebra II CWS #1 Unit 5



The **maximum** and the **minimum** values of F will occur at a vertex of the region.

$$8. \quad F = 4x + 2y$$

$$F_{\max} = \underline{44} \quad \text{at } \underline{(12.75, 3.5)}$$

$$F_{\min} = \underline{-28} \quad \text{at } \underline{(-3, 8)}$$

$$\text{At } (3, 10) \implies F = 12 + 20 = \mathbf{-8}$$

$$\text{At } (-3, 8) \implies F = -12 + 16 = \mathbf{-28}$$

$$\text{At } (-3, 3) \implies F = -12 + 6 = \mathbf{-18}$$

$$\text{At } (3, -3) \implies F = 12 - 6 = \mathbf{18}$$

$$\text{At } (12.75, 3.5) \implies F = 51 + 7 = \mathbf{44}$$

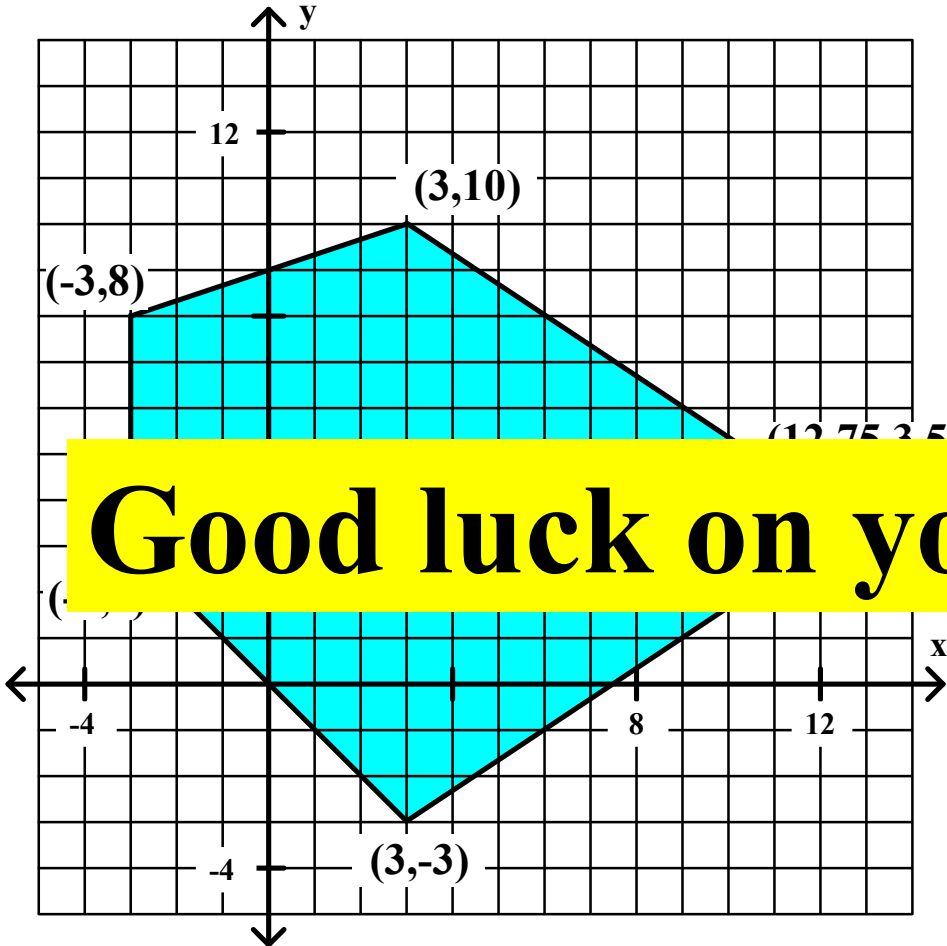
General Algebra II CWS #1 Unit 5

The **maximum** and the **minimum** values of F will occur at a vertex of the region.

8. $F = 4x + 2y$

$F = 44$ at $(12.75, 3.5)$

Good luck on your homework !!



At $(3, 10) \implies F = 12 + 20 = -8$

At $(-3, 8) \implies F = -12 + 16 = -28$

At $(-3, 3) \implies F = -12 + 6 = -18$

At $(3, -3) \implies F = 12 - 6 = 18$

At $(12.75, 3.5) \implies F = 51 + 7 = 44$

