Algebraic Inequialities

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Simple Inequalities for 100.

Which of the following inequalities is NOT true?

$$\begin{array}{l} -2 < -1 \\ 101 > 97 \\ 3/4 > 2/5 \\ -2/3 < -1 \\ -2/3 > -2 \end{array}$$

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Simple Inequalities for 200.

Which of the following inequalities is ALWAYS true?

$$x + 1 > 0$$

$$x - 1 < 0$$

$$x < 2x$$

$$x^{2} + 1 > 0$$

$$-x < x$$

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Simple Inequalities for 300.

Which of the following inequalities is true for $x=-1?\,$ musica

x > 0 x + 1 > 0 -x < 0 $x^{2} >$ $x^{2} > 1$

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Simple Inequalities for 400.



Assume 0 > y . Which of the following is true for all y ?

$$y^{2} < 0$$

 $y + 2 < 0$
 $-3y < y$
 $-3y < -5y$
 $y^{2} < y$

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Inequalities with x for 100.

Solve x + 2 > -2 x > 0 x < 0 x > 4 x > -4x < 4

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Inequalities with x for 200.

Solve -x + 3 > -2 x > 1 x < 5 x > -5 x > 5x < -1







Inequalities with x for 300.

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Solve -3x + 3 > -2x + 1

x > 2

x < 4

x > 4

x < 2

x < -4
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Inequalities with x for 400.

Solve |x + 3| > 1 x > 0 x > -2 x < 2 or x > -2 x < -4 or x > -2x < -4 or x > -2

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Inequalities with x and y for 100.

Which of the following inequalities is always true?

$$x < y$$

$$x^{2} > y$$

$$(xy)^{2} > -2$$

$$x + y > y$$

$$xy > 0$$

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Inequalities with x and y for 200.

Which of the following inequalities is satisfied by the point $x=10\ y=-1$?

$$x < y$$

$$x < y + 8$$

$$x^{2} < y + 1$$

$$-x > y$$

$$-x < y + 8$$

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Inequalities with x and y for 300.

Which of the following inequalities is satisfied by the point $x=-5\ y=2$

$$\begin{aligned} -x &< y\\ 2x &> y\\ x^2 &> 10y\\ -x &> 10y\\ -5x &< y\end{aligned}$$

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Inequalities with x and y for 400.

Which is true for x = -2 y = -2

 $\begin{array}{l} -x < y \\ 2x > y \\ 5xy + 3 > 21 \\ -7x + 2 > -10y - 3 \\ -5x + 10 < 12y + 11 \end{array}$

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Stupid questions for 100.

Let x = y = 0. Which inequality is true?

$$\begin{array}{l} x+y > 0 \\ xy > 0 \\ 12xy+5 < 16+x \\ -23x+y > -14y+x \\ x-y > 0 \end{array}$$

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Stupid questions for 200.

Let x = y = 1. Which inequality is true?

$$x > y$$

$$x + 1 < y +$$

$$-7x > 12y$$

$$x - y < 1$$

$$x + y > 2$$

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Stupid questions for 300.

Let x = 1. Which inequality is true for all y ?

$$y > x$$

$$y^{2} > x$$

$$x - y < -y + 1$$

$$xy > 2y$$

$$y^{2} + 2 > x$$



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Let x < 0 and y > 0. Which inequality is true?

$$xy > 0.$$

$$x - y > 0$$

$$x < -y$$

$$x/y > 0.$$

$$x^{2}y > 0$$



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Graphs for 100.

The inequality y < x is solved by:

Points on the line y = xPoints above the line y = xPoints on the line y = -xPoints below the line y = xOnly the point (0,0)



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Graphs for 200.

The inequality y > -2x + 3 is solved by:

Points above the line y = 2x - 3Points on the line y = -2x + 3Points above the line y = -2x + 3Points on the line y = -2x + 3Points below the line y = -2x + 3



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Graphs for 300.

The inequality -2y > 4x - 4 is solved by:

Points on the line y = -2x + 2Points below the line y = -2x - 2Points above the line y = -2x - 2Points above the line y = -2x + 2Points below the line y = -2x + 2



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All graphs $y = \log_a x$ always pass through:

Points (0,0) and (1,1)Points (a,0) and (1,a)Points (1,0) and (a,1)Points (0,1) and (a,1)None of the above



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