24 Quadratic Inequalities

Due:
12/14/2015 at 06:00am EST.

Students will be able to:

- Solve quadratic inequalities

Functions and symbols that WeBWorK understands.

Links to some useful WeBWorK pages for students

1. (1 pt) Solve the following inequalities. Enter the answers in interval notation.
(a) $x^2+9x-10\leq 0$
Answer: _____
(b) $10x^2+x+10>0$
Answer: _____

2. (1 pt) Solve the following inequality. Express the answer in interval notation.

$$(x-5)(x-15)>0$$

Answer: _____

3. (1 pt) Solve the following inequality. Express the answer in interval notation.

$$2x^2+x\geq 7$$

Answer: _____

4. (1 pt) Solve the following inequality. Write the answer in interval notation. **Note:** If the answer includes more than one interval write the intervals separated by the "union" symbol, U. If needed enter ∞ as *infinity* and $-\infty$ as *-infinity* .

$$x^2-6x>0$$

Answer: _____

5. (1 pt) Solve the following inequality. Write the answer in interval notation.
Note: If the answer includes more than one interval write the intervals separated by the "union" symbol, U. If needed enter ∞ as *infinity* and $-\infty$ as *-infinity* .

$$-x^2+7x\geq 0$$

Answer: _____

6. (1 pt) Solve the following inequality. Write the answer in interval notation.
Note: If the answer includes more than one interval write the intervals separated by the "union" symbol, U. If needed enter ∞ as *infinity* and $-\infty$ as *-infinity* .

$$x^2-1x-20>0$$

Answer: _____

7. (1 pt) Consider the inequality

$$x^2<1x+2$$

The solution of this inequality consists one or more of the following intervals: $(-\infty,A)$, (A,B), and (B,∞) where $A<B$.
Find A _____
Find B _____
For each interval, answer YES or NO to whether the interval is included in the solution.
$(-\infty,A)$ _____
(A,B) _____
(B,∞) _____

8. (1 pt) Solve the following inequality. Write the answer in **interval notation**.

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

Answer: _____

9. (1 pt) Solve the following inequality. Write the answer in **interval notation**.

$$(x-2)(x+1)\leq 0$$

Answer: _____

10. (1 pt) Solve the following inequality. Write the answer in **interval notation**.

$$-2x^2\leq 18$$

Answer: _____

11. (1 pt) Solve the following inequality. Write the answer in interval notation.
Note: If the answer includes more than one interval write the intervals separated by the "union" symbol, U. If needed enter ∞ as *infinity* and $-\infty$ as *-infinity* .

$$x^2+8x+16>0$$

Answer: _____

12. (1 pt) The inequality

$$(x+1)^2\leq 25$$

describes the interval:

__ _____, _____ __.