

So here are some inequality and absolute value questions from my collection. Not every problem below is hard, but there are a few, which are quite tricky. Please provide your explanations along with the answers.

1. If $6^x \cdot y = x^2 \cdot y + 9^x \cdot y$, what is the value of xy ?

- (1) $y - x = 3$
- (2) $x^3 < 0$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-20.html#p653690

2. If y is an integer and $y = |x| + x$, is $y = 0$?

- (1) $x < 0$
- (2) $y < 1$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-20.html#p653695

3. Is $x^2 + y^2 > 4a$?

- (1) $(x + y)^2 = 9a$
- (2) $(x - y)^2 = a$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-40.html#p653697

4. Are x and y both positive?

- (1) $2x - 2y = 1$
- (2) $x/y > 1$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-40.html#p653709

5. What is the value of y ?

- (1) $3|x^2 - 4| = y - 2$
- (2) $|3 - y| = 11$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-40.html#p653731

6. If x and y are integer, is $y > 0$?

- (1) $x + 1 > 0$
- (2) $xy > 0$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-40.html#p653740

7. $|x+2| = |y+2|$ what is the value of $x+y$?

- (1) $xy < 0$
- (2) $x > 2$ $y < 2$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-40.html#p653783 AND inequality-and-absolute-value-questions-from-my-collection-86939-160.html#p111747

8. $a \cdot b \neq 0$. Is $|a|/|b| = a/b$?

- (1) $|a^b| = a^b$
- (2) $|a|/|b| = |a/b|$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-40.html#p653789

9. Is $n < 0$?

- (1) $-n = |-n|$
- (2) $n^2 = 16$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-40.html#p653792

10. If n is not equal to 0, is $|n| < 4$?

- (1) $n^2 > 16$
- (2) $1/|n| > n$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-40.html#p653796

11. Is $|x+y| > |x-y|$?

- (1) $|x| > |y|$
- (2) $|x-y| < |x|$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-40.html#p653853

12. Is $r = s$?

(1) $-s \leq r \leq s$

(2) $|r| \geq s$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-40.html#p653870

13. Is $|x-1| < 1$?

(1) $(x-1)^2 \leq 1$

(2) $x^2 - 1 > 0$

Solution: inequality-and-absolute-value-questions-from-my-collection-86939-40.html#p653886