

[07-09-09D-T10-Problems]

Absolute value inequalities involving quadratic expressions

■ **Answer the following using interval notation.**

A graph is not required, but may be helpful to you.

[1] Find all values of x for which $|x^2 + 5x + 20| < 14$ is true.

[2] Find all values of x for which $|x^2 - 6x + 4| \leq -5$ is true.

[3] Find all values of x for which $|x^2 - 6x + 4| > 0$ is true.

[07-09-09D-T10-Answers]

Absolute value inequalities involving quadratic expressions

[1] $(-3, -2)$

[2] $x \in \emptyset$

[3] $(-\infty, \infty +)$