Stony Brook University
Mathematics Department
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Seminar in Mathematics
Teaching/Learning
MAT 519
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## Test 2

Name

1. Solve the equation $|x+3|+|x-2|=5$.
2.Draw the graph of the function $y=|x+3|-|x-2|$
2. What is wrong with the following chain of equalities?

$$
\log \left(x^{2}-6 x+9\right)=\log (x-3)^{2}=2 \log (x-3)
$$

4. What is wrong in the following solution of the equation $x=\sqrt{x+2}$ ?

$$
x=\sqrt{x+2} \Longleftrightarrow x^{2}=x+2 \Longleftrightarrow x^{2}-x-2=0 \Longleftrightarrow x=-1 \text { or } x=2 .
$$

How to make it correct?

