

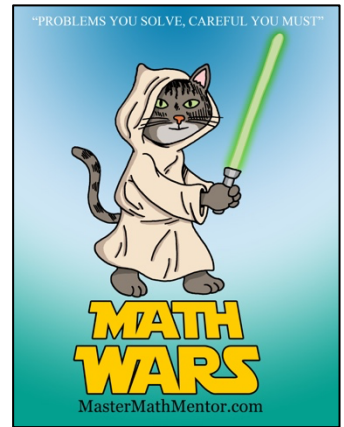
Math Wars – SAT/ACT

Topic 501 – Absolute Value



Maximum Time: 7 Minutes

Directions: To start, you need to download the Math Wars application on your cell phone: Use the QR code or the url: <https://mastermathmentor.com/mmm/mathwars.ashx?key=501>



When ready, start the timer and then solve the problems below, entering your

choice, A, B, C, D and pressing for each problem when you are sure of

your answer. When complete, stop the timer. You will see problems you got correct in green and incorrect in red. You will receive a score based on how many problems you got right and your time. A perfect score is all problems correct using half the maximum time or less. You can text or email your friends with your results.

1. (1 pt) How many solutions does the equation $|3x + 2| = 5$ have?

A. 0

B. 1

C. 2

D. 3

2. (3 pts) Given $y = |x - 3|$, $x = 0$ and $y = 0$, find the area bounded by all three curves.

A. 9

B. $\frac{9}{2}$

C. 6

D. 18

3. (5 pts) How many integer values of x satisfy the inequality $2|2x + 3| < 8$?

A. 2

B. 3

C. 4

D. 5

4. (7 pts) What is the sum of the solutions to $|x^2 - 5| = 1$?

A. $\sqrt{6} + 2$

B. $2\sqrt{6} + 4$

C. $2\sqrt{6}$

D. 0

5. (9 pts) Given the equation $y = |x^2 - 4x - 1|$, what is the distance between the x -intercepts of the graph?

A. 4

B. $2\sqrt{5}$

C. $4 + 2\sqrt{5}$

D. $2\sqrt{10}$