

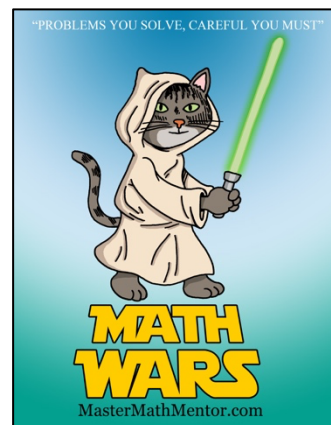
Math Wars – SAT/ACT

Topic 504 – Essential Algebraic Skills



Maximum Time: 6.25 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=504>



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 pts) If $x = -2$ and $y = -3$, the sign of $\sqrt{-2xy^2 - 3x^2y}$ is
 - positive
 - negative
 - \pm
 - this is an imaginary number
- (3 pt) If $\frac{1}{3} = \frac{b - \frac{1}{2}}{\frac{1}{2}}$, find the value of b .
 - $\frac{4}{3}$
 - $\frac{1}{4}$
 - $\frac{2}{3}$
 - $\frac{1}{3}$
- (5 pts) If the expression $3x^3y^2 + 2x^2y^5$ is evaluated when $x = 8.2$ and $y = 12.3$, find the approximate answer using scientific notation.
 - 0.0381×10^8
 - 0.381×10^7
 - 3.81×10^7
 - 3.81×10^8
- (7 pts) Given the equation $2(x-3) - \frac{3x}{2} = \frac{4}{3}(x-2)$, find the value of $4-x$.
 - 8
 - 4
 - 0
 - 4
- (9 pts) Given the equation $\frac{2}{x+1} - \frac{1}{y} = 4$, solve for y .
 - $\frac{-x+1}{4x+2}$
 - $\frac{-x-1}{4x+2}$
 - $\frac{x+1}{4x-2}$
 - $\frac{x-1}{4x-2}$