

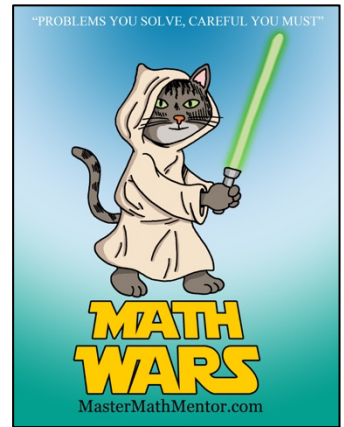
Math Wars – SAT/ACT

Topic 518 – Coordinate Geometry



Maximum Time: 8 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=518>



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) Find the diameter of $2x^2 + 2y^2 = 10$.

A. 10

B. 5

C. $2\sqrt{5}$

D. $\sqrt{5}$

2. (3 pts) The functions $400 - x^2$ and $y = 76$ intersect at 2 points. Find the distance between them.

A. 152

B. $3\sqrt{2}$

C. $6\sqrt{2}$

D. 36

3. (5 pts) The endpoints of a diameter of a circle are $(-6, 6)$ and $(6, 8)$. Which of the following is the equation of the circle?

A. $x^2 + y^2 - 14y + 12 = 0$

B. $x^2 + y^2 + 14y + 12 = 0$

C. $x^2 + y^2 = 37$

D. $x^2 + y^2 - 12 = 0$

4. (7 pts) Find the equation of the line passing through the origin and the center of circle $2x^2 - 12x + 2y^2 + 4y = 12$.

A. $x - 3y = 0$

B. $x + 3y = 0$

C. $3x + y = 0$

D. $-3x + y = 0$

5. (9 pts) A right triangle has vertices $A(-2, -3)$, $B(3, 2)$, and $C(0, 5)$. Find the area of the triangle to the nearest whole number.

A. 10

B. 15

C. 25

D. 30