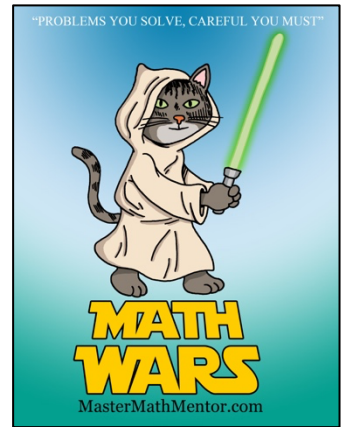# Math Wars – SAT/ACT
Topic 502 – Fractions/Decimals/Percent

Maximum Time: 5.75 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=502

When ready, start the timer and then solve the problems below, entering your choice, A, B, C, D and pressing Submit 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) Simplify $\dfrac{\frac{3}{4}}{\frac{2x}{3}}$

   A. $\dfrac{x}{2}$ B. $\dfrac{9}{8x}$ C. $\dfrac{9x}{8}$ D. $\dfrac{2}{x}$

2. (3 pts) A shopper wants to create a trail mix that contains 30% cashews and 15% raisins with the remainder an unknown percentage each of chocolates and M&M's. If the total mix is 2 pounds, how many ounces in total is comprised of M&M's and chocolates.

   A. 1.1 ounce   B. 10.2 ounces   C. 17.6 ounces   D. not enough information

3. (5 pts) If x is y% of z, express y in terms of x and z.

   A. $\dfrac{x}{z}$ B. $\dfrac{100x}{z}$ C. $\dfrac{xz}{100}$ D. $\dfrac{x}{100z}$

4. (7 pts) A family on vacation has to travel 800 miles. They rent a vehicle that gives information using the Metric system. They average 100 km/hr. If they travel for 4 hours, how much farther do they have to travel to reach their destination? (1 mile = 1.6 km).

   A. 550 miles   B. 160 miles   C. 400 miles   D. 250 miles

5. (9 pts) A sporting goods store offers a 15% discount on the list price of sneakers plus a 7% tax on this discounted price. If the total amount paid is $93, what is the list price of the sneakers?

   A. $84.58   B. $114.43   C. 113.46   D. $102.25