

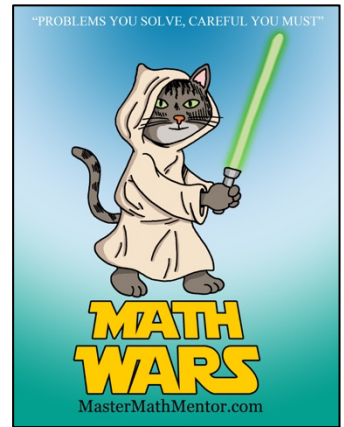
Math Wars – SAT/ACT

Topic 503 – Ratio/Proportion/Rates



Maximum Time: 6.5 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=503>



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.

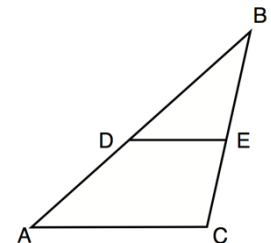
1. (1 pt) A recipe calls for $\frac{3}{4}$ cup of butter for a batch of 12 cookies. How much butter is needed for 16 cookies?

- A. 1.5 B. 0.875 C. 1 D. 1.125

2. (3 pts) A bullet travels 30 miles per minute. Find its speed in km/hr. (1 mile = 1.6 km).

- A. 1,125 B. 1,800 C. 480 D. 2,880

3. (5 pts) Given in the figure to the right is triangle ABC with $DE \parallel AC$. If $AB = 15$, $BC = 12$, and $EB = 9$, find AD.



- A. $\frac{36}{5}$ B. $\frac{45}{4}$
C. 6 D. $\frac{15}{4}$

4. (7 pts) The ratio of $m:n$ is 3:7. The ratio of $k:n = 12:21$. Find $m:k$.

- A. $\frac{3}{4}$ B. $\frac{4}{3}$ C. $\frac{1}{4}$ D. $\frac{1}{7}$

5. (9 pts) In a bag, there are marbles whose ratio Red: Blue: Green: Yellow is 4:7:2:3. There are 60 more red marbles than green. How many more blue marbles are there than yellow?

- A. 210 B. 120 C. 60 D. not enough information