

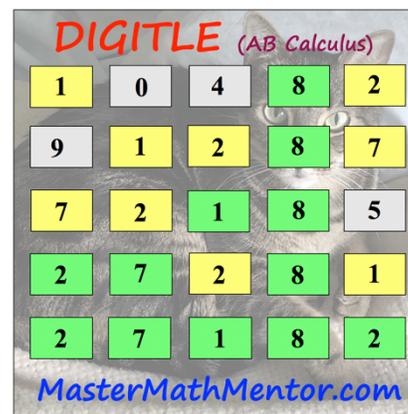
# DIGITLE – SAT/ACT

## Puzzle 520 – Miscellaneous

**Directions:** The first 5 problems have single digits answers. The 6<sup>th</sup> problem has a 5-digit answer (counting leading zeros if present). You have a choice: solve the easier single-digit answer problems or tackle the more difficult 5-digit answer. Once you have done that, attempt to solve the puzzle by entering the following url on your computer, tablet, or phone:

<https://mastermathmentor.com/mmm/digitle.ashx>.

The correct puzzle answer will be the digits of your answer(s) scrambled. Use the following interpretation. You get 6 tries.



**Green :** the digit is in the answer and is in the correct spot.

**Yellow:** the digit is in the answer but is not in the correct spot.

**Grey :** the digit is not in the answer.

### Single Digit Answers:

- 1) An automobile uses 24 pints of fuels for every 75 miles traveled. How many gallons of fuel are needed to travel 150 miles?
- 2) Two horses, Paul Revere and Valentine run the same race of 1.5 miles. Paul Revere averages 30 mph while Valentine averages 44 ft/sec. Find the difference measured in seconds between the times it took each horse to run the race.
- 3) A small construction company with 8 employees can renovate a house in 3 months. There is a bonus if the job is completed in 2 months. How many men must be added from the start to achieve the bonus?
- 4) Because of space considerations, the length of a rectangular garden varies inversely with the width. If the length is 18 feet and the width is 6 feet, what is the width in feet when the length is 144 feet?
- 5) Suppose pipe  $a$  can fill a tank in 10 minutes by itself, pipe  $b$  can fill the same tank 6 minutes by itself, and pipe  $c$  can empty a full tank by itself in 4 minutes. If all pipes are operating at the same time, how many hours will it take to fill an empty tank?

### 5-Digit Answer:

- 6) A small city has 360,324 residents. The ratio of people who are vaccinated for COVID-19 to unvaccinated is 5:4. A month later, the ratio has improved to 3:2. How many more people were vaccinated within that month? Round answer to the nearest person.