

DIGITLE – SAT/ACT

Puzzle 503 – Isolating Quantities

Directions: The first 5 problems have single digits answers. The 6th 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) Solve the equation for x : $3(x-4) - \frac{1}{2}x = 2x - 8$

2) If $q - f = \frac{p+q}{r}$, what is the value of q when $rf = 12$, $p = \sqrt{36}$, $r - 1 = 2$

3) If $x^2 + bx + 10 = (x - 2)^2 + k$ where b and k are constants, what is the value $\frac{b+k}{2}$?

4) Let $(ax + 3)(bx + 7) = 15x^2 + cx + 21$. If a and b are positive integers and $a > b$, what is the value of $\frac{c}{11}$?

5) If $\frac{3x}{5} + 2 = \frac{3}{4}\left(x + \frac{8}{3}\right)$, what is the value of x ?

5-Digit Answer:

6) If $\frac{3x}{4} - (x-2)^2 + 2(x+3)$ is expressed in the form $\frac{ax^2 + bx + c}{d}$, what is the value of $c^2(b-a)$?