



Brain Teasers

Gary R. Gruber, the author of more than 30 test-prep books (drgarygruber.com), designed this challenge to test your problem-solving skills. Remember: Creative people look outside the realm of normal thinking to solve problems.

JUL

1. What letters do **X**, **Y**, and **Z** represent in the following three-word phrase: **XYere ZYere Xere**
2. Phil is taking a 100-mile trip. If he averages 25 miles per hour during the first half, what must he average during the second half to make his average speed for the whole trip 50 miles per hour?
(A) 50 miles per hour (C) 100 miles per hour
(B) 75 miles per hour (D) none of the above
3. What is the next letter in the sequence: **a l b e m f i n j**
(A) **l** (B) **m** (C) **o** (D) **p** (E) **q**
4. Three items in a store are each sold with successive discounts.
The first is sold with successive discounts of 60% and 40%.
The second is sold with successive discounts of 50% and 50%.
The third is sold with successive discounts of 30% and 70%.
Which of the following is true of each item's equivalent discount?
(A) **It is between 70% and 80%.**
(B) **It is between 80% and 90%.**
(C) **It is 100% for all three items.**
(D) **None of the above are true.**
5. What is the value of the sum of the first 99 consecutive integers?
That is, what is the sum of **1 + 2 + 3 + 4 + ... + 98 + 99**?
6. Suppose a store sells donuts only in boxes of **6**, **9**, and **20**. What is the *greatest* number of donuts it is *not* possible to purchase?
7. Which word does not belong with the others?
(A) **fallable**
(B) **congruous**
(C) **flammable**
(D) **famous**
(E) **exact**

ANSWERS: 1. X = w; Y = h; Z = t. The phrase is: where there were 2. (D) The first half of the trip took two hours. Since the entire trip needs to take two hours for him to average 50 miles per hour, he would have to go an infinite speed. 3. (B) 4. (A) The first item's equivalent discount is 76%, the second's is 75%, and the third's is 79%. 5. 4,950. Write the numbers as: $1+2+3+4+\dots+99=N$. Then write the numbers in reverse: $99+98+97+96+\dots+1=N$. Adding both sums gives $100+100+100+\dots+100 \times 99=2N$, and $N=4,950$. 6. 43 7. (C) If we put the prefix "in" in front of each word, the word takes on the opposite meaning, with the exception of the word *flammable*. *Inflammable* has the same meaning as *flammable*. near genius; 7 right = 10 of 150; genius

SCORING: 1-2 right = 10 of 120; above average; 3-4 right = 10 of 130; very smart; 5-6 right = 10 of 140.

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