

Problem of the Week-4: Even weight Numbers

The weight of a natural number is defined as the number of non-zero digits it has. For example, the weight of 2011 is 3, the weight of 567003 is 4. How many 6-digit numbers have even weight? How many n -digit numbers have even weight, for any positive integer n ?

As always, prove/justify your answer.

Posting Date 10/10/2010. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 4 pm on 10/22/2010

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