

# ROMANIAN MATHEMATICAL MAGAZINE

**Solve for natural numbers:**

$$5^a - 5^b = 620$$

*Proposed by Marin Chirciu-Romania*

*Solution by Tapas Das-India*

$$5^a - 5^b = 620 \text{ or } 5^b(5^{a-b} - 1) = 5 \times 124 = 5(5^3 - 1)$$

*Comparing we get  $b = 1$  and  $a - b = 3$  or  
 $a = b + 3 = 3 + 1 = 4$*

*Solution  $a = 4, b = 1$ .*