



18. The numbers 2, 3, 12, 14, 15, 20, 21 may be divided into two sets so that the product of the numbers in each set is the same. What is this product?
- A 420                      B 1260                      C 2520                      D 6720                      E 6350400

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18. C The product of all the numbers in the list is  $2 \times 3 \times 12 \times 14 \times 15 \times 20 \times 21$  which, when expressed in terms of prime factors is  $2 \times 3 \times 2 \times 2 \times 3 \times 2 \times 7 \times 3 \times 5 \times 2 \times 2 \times 5 \times 3 \times 7$  which is equal to  $2^6 \times 3^4 \times 5^2 \times 7^2 = (2^3 \times 3^2 \times 5 \times 7)^2 = 2520^2$ . The answer 2520 is expressible as both  $2 \times 3 \times 20 \times 21$  and  $12 \times 14 \times 15$ .