Decompose a Factor

1. Solve the problems below. For each problem, show one way to find the product by decomposing one factor into addends, multiplying each term, and adding the partial products.

   a) 6 x 4 b) 7 x 8 c) 9 x 6 d) 8 x 9 e) 6 x 8 f) 9 x 7

   Example: 8 x 6 = ?
   8 x (5 + 1) = (8 x 5) + (8 x 1) = 40 + 8 = 48
   or 8 x (3 + 3) = (8 x 3) + (8 x 3) = 24 + 24 = 48

2. Create your own 1-digit x 1-digit problem. Explain how you could decompose a factor to quickly find the product of the two numbers mentally.

   Example: 6 x 7 = ?
   I split 7 into 5 and 2. In my mind I can quickly compute 6 x 5 = 30, then 6 x 2= 12, and add 30 plus 12. The product of 6 x 7 is 42.