

Tennis balls

Annotation

Mari uses her knowledge of known multiplication facts to solve this division problem. She understands the context of the problem, the commutative property of multiplication and checks that her solution answers the problem.

Problem: Tennis balls

The teacher shows this problem to the student and reads it with her as required:

Tennis ball bags hold 4 balls. There are 80 tennis balls to be put into these bags. How many bags are needed to fit all 80 balls?

Student response

Mari: You'd need 20 bags.

Teacher: Tell me how you did that.

Mari: I saw the 8 in the 80 and the 4 and thought of 4×2 , which I know is 8. So I thought it would be 4×20 to make 80. Then I had to turn 4×20 around and check that 20 lots of 4 really is 80 and I know it is because whichever way round you times it, the answer's the same. So I got 20 bags with 4 tennis balls in each bag.

Teacher: Tell me how you would record that.

Mari: Well it's really saying how many 4s are there in 80 so I would write it as a 'divided by' problem like this, $80 \div 4 = 20$, but I could also write it like I did it which is $4 \times 20 = 80$.