Mince patties

Annotation

Ali uses reversibility to solve this division problem, competently multiplying decimal fractions to reach a correct solution. She accurately explains her calculation and ensures that she remains focused on the value of the numbers she is working with. Ali responds to the relationships between the numbers in this problem using these to advantage to efficiently calculate her solution.

Problem: Mince patties

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

Ivan has 2.4 kilograms of mince to make patties. Each pattie takes 0.15 kilograms of mince. How many patties can Ivan make?

Student response

Ali:	He can make 16 patties.
Teacher:	Tell me how you did that.
Ali:	When I look at those numbers I didn't like the 0.15. I'd rather work with 0.3 and since 2 x 0.15 equals 0.3 it works with these numbers. So I said "what times 0.3 = 2.4?" Well, 8 x 3 = 24 so 8 x 0.3 will equal 2.4. Because I doubled the 0.15 back there, it means that I've worked out that there are eight lots of two patties in 2.4kg of mince. So there must be 16 single patties. These numbers work really nicely.
Teacher:	What do you know that helped you?
Ali:	Well I just know that simple numbers are easier to deal with. So doubling 0.15 to make 0.3 might help as long as I didn't forget that I had doubled it! I also know that the decimal point goes between 2 and 4 because I'm working with tenths.