Garden metres

Annotation

Keith solves this problem by correctly applying a recently learned doubling and halving strategy. He knows the relationship between length, width, and area and he interprets this multiplication context correctly. He recognizes the proportional relationship between the numbers as he applies his strategy and he is able to explain his thinking.

Problem: Garden metres

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

Tama's garden is 36 metres long and 5 metres wide, how many square metres is his garden?

Student response

Keith:	The garden's 180 square metres.
Teacher:	Tell me how you did that.
Keith:	Well, I knew it was a multiplication problem and that I needed to work out 5 x 36 because you have to multiply the length times the width to get the square metres. And this one is like the ones we've just been doing which is doubles and halves. I know I can double the 5 and make it into a 10 and because the 36 is an even number I know I can find what half of that is and times the two together. So 5 x 36 is really like doing 10 x 18. 10 times 18 is easy. It's just 180.
Teacher:	What else do you know that helped you?
Keith:	Well we've been learning to choose which one to double and which one to halve because you can't work with half a number like you would have to do if the 36 was an odd number. It's got to make working out the answer easier or you don't do it that way.