

The ball dress

Annotation

Emma uses her place value knowledge of decimals to solve this addition problem. She adds the whole numbers first. Then she composes 1 and 1 tenth from 11 tenths, and adds this to her whole number sum. She understands the relationship between decimals and whole numbers. She also identifies, and can apply, an efficient rounding and compensating strategy.

Problem: The ball dress

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

It took 4.6 metres of patterned fabric and 2.5 metres of plain fabric to make a ball dress. How much fabric was used altogether to make the dress?

Student response

Emma: It's 7.1 metres. I just said $4 + 2$ is 6, and $.6 + .5$ is 1.1. So It's 7.1.

Teacher: What do you know that helped you?

Emma: I know that often with decimals it's easier to add the whole numbers first. I also know that there are ten 10ths in one whole. I could also see straight away that it was going to be 7 and a little bit.

Teacher: Why did you do it that way?

Emma: Because using place value here makes sense but I could also have called that (4.6) 5 and that (2.5) 3, added 5 and 3 and then taken 0.9 from 8.

Teacher: How would you record that?

Emma: Well just $4 + 2 = 6$ and $0.6 + 0.5 = 1.1$ and $6 + 1.1 = 7.1$. It's quite easy really.

$$4 + 2 = 6$$

$$0.6 + 0.5 = 1.1$$

$$6 + 1.1 = 7.1$$