

Maths adviser

Approach: One to one

Level: Year 4 and year 8

Resources: 7 cards and a packet of 15 wooden cubes.

Questions/instructions

Let's imagine that someone in your class needs some help with maths, and that you are going to try to explain the answers.

I'll ask the questions, and you try to explain the answers. You will need to say more than "yes" or "no" — because you want them to understand. Use the cubes to help show what you mean.

Encourage the student to use the cubes and explain an answer, rather than just saying yes, no or maybe.

Show cards 1a and 1b

1. Is 4 plus 3 the same as 3 plus 4?

Prompt: Show me using the cubes.

	% responses	
	y4	y8
Correct conclusion: with demonstration	81	95
not demonstrated	15	4

Show cards 2a and 2b

2. What about 4 minus 3 and 3 minus 4?

Are they the same?

Prompt: Show me using the cubes.

Correct conclusion: with demonstration	47	76
not demonstrated	13	11



Show cards 3a and 3b

3. Does 2 times 5 give the same answer as 5 times 2?

Prompt: Show me using the cubes.

	% responses	
	y4	y8
Correct conclusion: with demonstration	38	68
not demonstrated	40	28

Show card 4. Note — cubes are not used for these questions. Place card with '7' on it in front of the student.

4. Is there a number you can add to, or take away from this number, but the number still stays the same? Tell me what it is and how this works.

Correct, good explanation of:		
both addition and subtraction	29	52
only one operation	10	5
Correct: but inadequate explanation	13	20

5. What about multiplying or dividing. Is there a number you can multiply (or times) this number by, or divide it by, so that the number stays the same? Tell me what it is and how this works.

Correct, good explanation of:		
multiplication and division	10	41
only one operation	19	17
Correct: but inadequate explanation	7	20