



Climbing Conundrum

There are three climbing walls in a playground. Five children are having a competition to see how far they can climb up each one.

They have decided that whoever climbs the furthest on each wall should get a score of 1, then the person who comes second should get a score of 2, and so on. The three scores for each child will then be multiplied together, and the person with the lowest score will win.

Here are their scores for the first two climbing walls:

	Wall 1	Wall 2	Multiplied scores
Anu	3	4	
Bryn	1	5	
Clare	2	3	
Duncan	4	1	
Elise	5	2	

At the moment, who is in the lead?

If the scores were added together, rather than multiplied, would this change the order? How?

On the third wall, after the first four children have climbed, the scores look like this:

	Wall 1	Wall 2	Wall 3	Multiplied scores
Anu	3	4	1	
Bryn	1	5	3	
Clare	2	3	2	
Duncan	4	1	4	
Elise	5	2		

What are the multiplied scores at this point? (Remember, these scores will only be accurate if Elise comes fifth on Wall 3, because if she overtakes anybody else then their score for Wall 3 will change.)



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Elise starts her climb. Anu says to the others, "I'm joint first out of the four of us, so if Elise overtakes me then I'll still finish in the top three."

Do you think that Anu is probably right? Can you explain your thinking?

Have a go at working out what everybody's scores will be if Elise climbs the highest on Wall 3. Compare this to what would happen if Elise came fifth on Wall 3. (You might also like to work out what would happen if Elise came second, third or fourth, to compare all the possible outcomes.)

How would the outcome have been different if the scoring is reversed (5 for the best, 1 for the worst)?

How would the outcome have been different if the scores were added rather than multiplied?

Which scoring system do you think is fairest? Why?