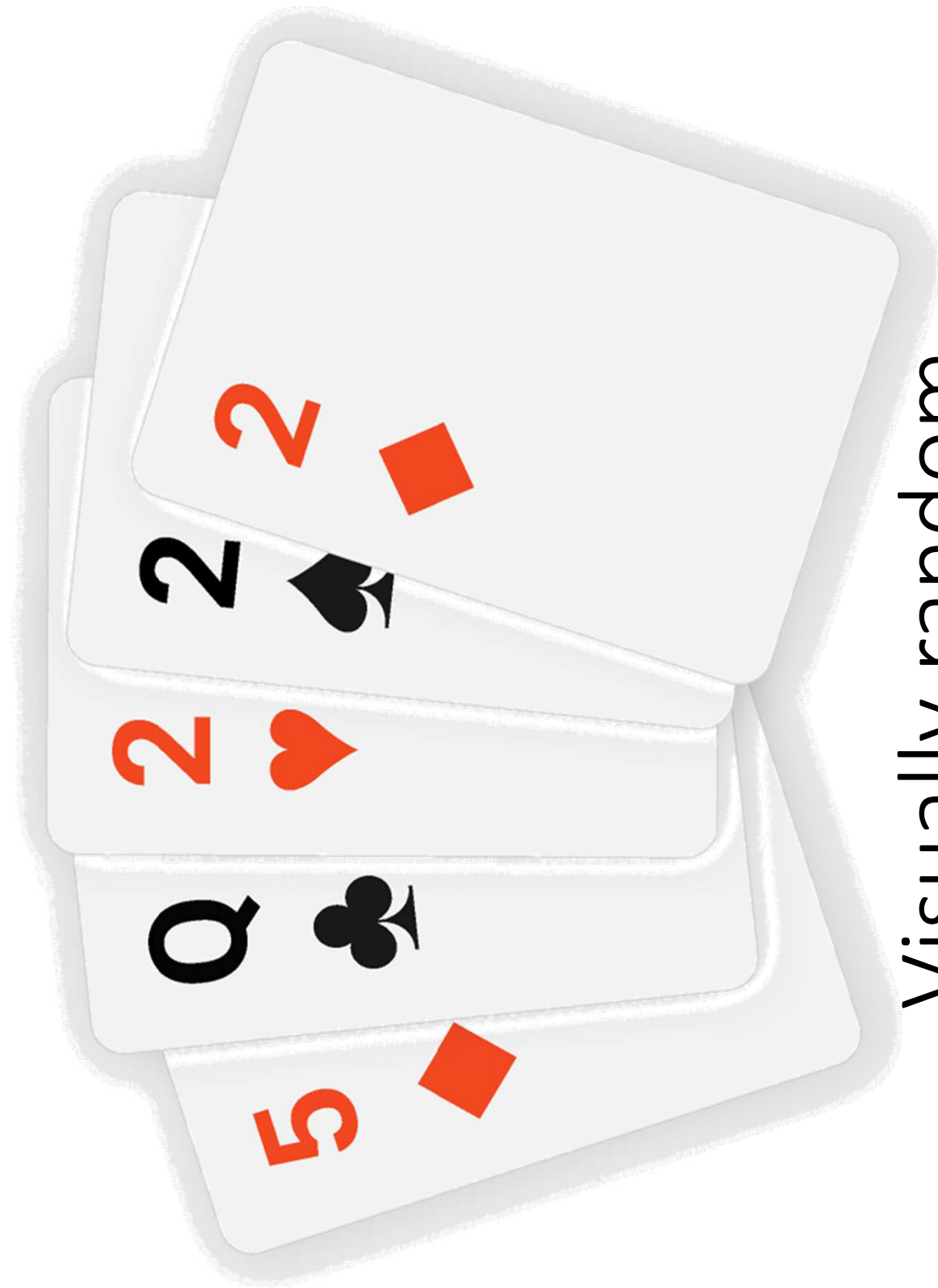


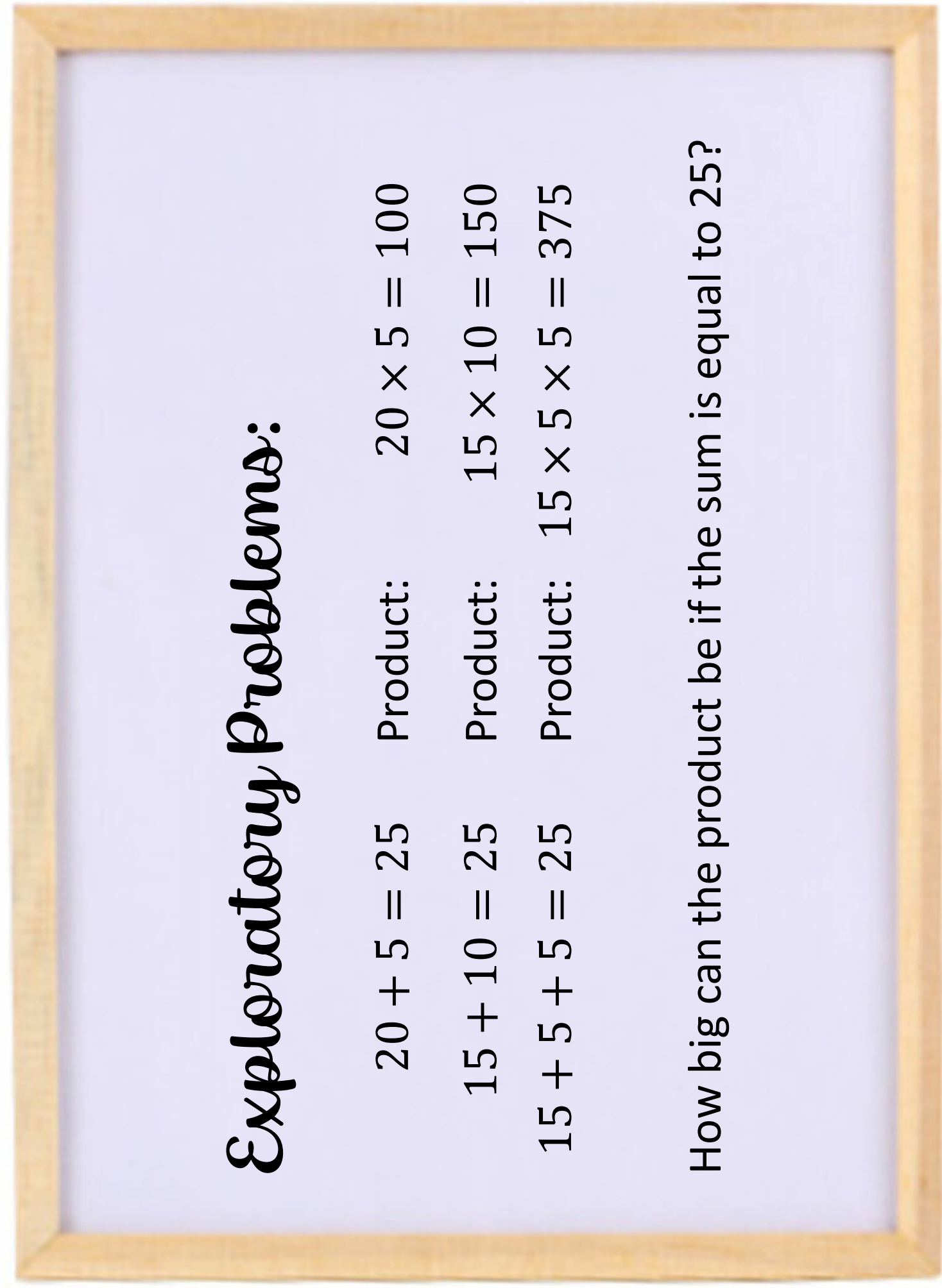
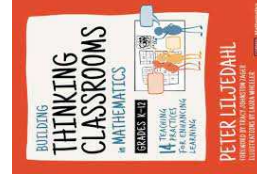


An All-of-the-above Approach



Visually random
group assignments

	vertical whiteboard	horizontal whiteboard	vertical paper	horizontal paper	notebook
N (groups)	10	10	9	9	8
1. time to task	12.8 sec	13.2 sec	12.1 sec	14.1 sec	13.0 sec
2. time to notation	20.3 sec	23.5 sec	2.4 min	2.1 min	18.2 sec
3. eagerness	3	2.3	1.2	1	0.9
4. discussion	2.8	2.2	1.5	1.1	0.6
5. participation	2.8	2.1	1.8	1.6	0.9
6. persistence	2.6	2.6	1.8	1.9	1.9
7. non-linearity	2.7	2.9	1	1.1	0.8
8. mobility	2.5	1.2	2	1.3	1.2



Student Voices

At first I was worried [about all the material we need to know for] the midterm. But then I realized that based on all the practice we have done, we are already well-prepared.

This course was the first in which it occurred to me there could be more to learning and studying than conceptual understanding matters and what it is.

Before this term, I thought that if you want to learn something new, you should sit quietly in class and listen. Yet, in this class we walked around, we discussed and argued - and learned by working out problems ourselves.



First Last name / name	Email address	State	Started on	Completed on	Time taken	Grade/10.00	Q. 1	Q. 2	Q. 3	Q. 4	Q. 5
LT	linearand@myyorku.ca	Finished	9 February 2023 10:59 PM	9 February 2023 11:23 PM	24 mins 1 sec	2.29	1.43	0.00	0.50	0.00	0.36
		Finished	10 February 2023 11:23 PM	10 February 2023 11:51 PM	27 mins 19 secs	6.97	2.50	0.50	1.50	1.00	1.07
		Finished	10 February 2023 11:52 PM	11 February 2023 12:06 AM	13 mins 42 secs	9.71	2.14	1.50	2.00	1.00	1.07