

Approach: Group

Year: 8

Focus: Fractions, decimals and percentages

Resources: Felt board, 12 cards, 2 recording sheets

Questions / instructions:

Put the cards in a pile face down on the table.
Lie the felt board flat on the floor or desk.
Point to the 0, 1 and 2 on the number line.



This is a number line between 0 and 2.

Each of you is going to take a card from this pile and put it on the number line where you think it should go.

To start with, each person puts the card on the number line on their own. Later on you will work together to change some of the cards around.

Have Student 1 (or a confident maths student) start by taking the first card and putting it on the number line.

Record on recording sheet 1 where the card is placed.

Then have Student 2 place the next card on the number line. Record on recording sheet 1 where the card is placed.

Keep going until all the cards are placed.

As a team I want you to discuss if you think all the cards on the number line are in the right places. If you all agree, you can move the cards to other places on the number line.

When you have decided everything is in the correct place, I'll copy it onto this sheet.

Allow time.

1. Have you got the cards all in the right places?
If you are finished, I'll copy down your number line.

Record on the recording sheet where all the cards are placed in their final positions.

Accuracy of placement:

[Note: Scores are based on team responses.]

Card Value	Inner Zone	Outer Zone	Not Within Zones	% responses
12.5%	0.05 – 0.2	0.0 – 0.3		42
				26
				33
0.3	0.2 – 0.4	0.1 – 0.5		52
				28
				20
40%	0.3 – 0.5	0.4 – 0.6		51
				16
				33
1/2	0.4 – 0.6	0.3 – 0.7		49
				6
				45
5/8	0.55 – 0.7	0.45 – 0.8		29
				12
				59



inner zone (0.55 – 0.75)
outer zone (0.5 – 0.85)
not within zones



inner zone (0.65 – 0.85)
outer zone (0.55 – 0.95)
not within zones



inner zone (1.1 – 1.3)
outer zone (1.05 – 1.4)
not within zones



inner zone (1.15 – 1.35)
outer zone (1.05 – 1.45)
not within zones



inner zone (1.4 – 1.6)
outer zone (1.3 – 1.7)
not within zones



inner zone (1.4 – 1.6)
outer zone (1.3 – 1.7)
not within zones



inner zone (1.9 – 2.1)
outer zone (1.8 – 2.1)
not within zones

Total score:	Score Range	% responses
	22–24	18
	19–21	17
	16–18	20
	13–15	18
	10–12	20
	7–9	4
	4–6	2
	0–3	2

Commentary:

More than half of the teams placed the cards in the inner zones for eight of the 12 task components. Placement of $\frac{5}{8}$ and $\frac{2}{3}$ caused the most difficulty. Some groups were highly accurate across all components. On the placement of $\frac{1}{2}$, many teams thought they were placing $\frac{1}{2}$ of 2, producing an incorrect result.

% responses
y8