Task: Number Line Game (Y4)

Approach:	Team	Year:	4
Focus:	Fractions, decimals and percentages		
Resources:	2 felt boards, 2 sets of 8 cards, 2 recording sheets		

Questions / instructions:

Put the eight whole number cards in a pile face down on the table. Lie the felt board flat on the floor or desk so that the side marked 15 and 25 is face up.

This is a number line.

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, 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. Then have Student 2 place the next card on the number line. 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 all 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 recording sheet 1 where all the cards are placed in their final positions.

Accuracy of placement:

[Note: Scores are based on team responses.]

		% responses y4
5	inner zone *(5 – 5.5)*	39
	outer zone *(5 – 6)*	18
	not within zones	42
10	inner zone *(9 – 11)*	76
	outer zone *(8 – 12)*	18
	not within zones	6
12	inner zone *(11 – 13)*	77
	outer zone *(10 – 14)*	22
	not within zones	1
20	inner zone *(19 – 21)*	85
	outer zone *(18 – 22)*	9
	not within zones	7
26	inner zone *(25.5 – 27)*	95
	outer zone *(25 – 28)*	4
	not within zones	1
29	inner zone *(28 – 30)*	73
	outer zone *(27 – 31)*	22
	not within zones	5
30	inner zone *(29 – 31)*	69
	outer zone *(28 – 32)*	25
	not within zones	6
35	inner zone *(34.5 – 35)*	68
	outer zone *(34 – 35)*	13
	not within zones	19

Put the eight fraction cards in a pile face down on the table. Lie the felt board flat on the floor or desk so that the side marked 0, 1 and 2 is face up. Point to the 0, 1 and 2 on the number line.

This is number line between 0 and 2.

Repeat instructions in shaded box adjacent.

2. Have you got the cards all in the right places?

If you are finished, I'll copy down your number line.

Record on recording sheet 2 where all the cards are placed in their final positions.

Accuracy of placement:

		% responses y4
$\frac{1}{4}$	inner zone *(0.15 – 0.35)*	32
	outer zone *(0.1 – 0.4)*	5
	not within zones	63
$\frac{1}{3}$	inner zone *(0.25 – 0.4)*	34
	outer zone *(0.2 – 0.45)*	6
	not within zones	61
$\frac{1}{2}$	inner zone *(0.4 – 0.6)*	31
	outer zone *(0.3– 0.7)*	5
	not within zones	64
$\frac{2}{3}$	inner zone *(0.6 – 0.75)*	26
	outer zone *(0.5 – 0.85)*	10
	not within zones	64
$\frac{7}{8}$	inner zone *(0.75 – 0.95)*	30
	outer zone *(0.7 – 1.0)*	1
	not within zones	69
$\frac{2}{2}$	inner zone *(0.95 – 1.05)*	21
	outer zone *(0.9 – 1.1)*	2
	not within zones	77
$1\frac{1}{2}$	inner zone *(1.4 – 1.6)*	41
	outer zone *(1.3 – 1.7)*	8
	not within zones	51
$1\frac{3}{4}$	inner zone *(1.65 – 1.85)*	30
	outer zone *(1.55 – 1.95)*	18
	not within zones	52

Total score:	% responses y4
26–30	13
21–25	14
16–20	46
11–15	26
6–10	2
0–5	0

Commentary:

Students were highly accurate with simple placements of whole numbers but had more difficulty with fractions. Some teams were successful across almost all tasks.