Day 34 · Fractions between zero and one

Make a little trail from zero to one whole.

Useful purpose: Place unit fractions and multiples on an equal-interval 0–1 number line without counting ticks as parts.

1 · Find the starting point

Check what 0 and 1 mean for the chosen whole. Count five equal gaps between six marks; show that marks are boundaries, not separate pieces.

2 · Prepare

Use the original MODEL fractions cue or a new paper line. A device can display the SVG, but looking at it is not child software creation. A spoken ordered list with equal-interval description gives the same maths access.

3 · Brief worked model

MODEL number line runs from 0 to 1 whole, split into five equal gaps. Labels are 0,1/5,2/5,3/5,4/5,1. The point 3/5 lies at three one-fifth steps from zero. Two more one-fifth steps reach the same whole. A line with uneven gaps cannot show these equal fraction steps accurately, even if its labels look right.

4 · A different guided try

Use a new thirds line: 0,1/3,2/3,1. Ask the child to locate 2/3 and explain the missing 1/3. Then offer a quarters line with only endpoints and invite its equal marks. Avoid introducing different-denominator addition as a requirement.

5 · Your own attempt

Choose denominator 2,3,4,5 or 10. Make/describe an equal-gap line from 0 to 1, locate a chosen multiple and explain what would reach 1. Use words, tactile-safe paper folding if wanted, typing, signing or an exact adult scribe.

6 · Observe what was actually shown

Observe whole/endpoints, equal intervals, interval count, unit label and multiple position. A correct numeral copied onto an uneven line needs further teaching, not automatic N02 clearing.

Specific next teaching

If ticks and gaps are confused, physically or verbally trace three gaps between four marks in a new line. If secure, connect the same fraction to a set or area while keeping its whole explicit.

Three choices you can switch between

1 · Trail marker

Where would your marker go?

MODEL thirds line has equal gaps. Place a marker at 2/3; it is two gaps from 0 and one gap from 1. No timed walking route or body movement needed.

Evidence/observation: Supplied number-line interpretation, not actual travel.

Specific next teaching: Try a different denominator with unlabelled internal marks.

2 · Build a clear line

Help someone find three-fifths.

Make/describe a five-equal-gap 0–1 line and place 3/5. A helper can draw where directed. Label endpoints and say why six boundary marks do not mean sixths.

Evidence/observation: Own representation; adult operation distinguished.

Specific next teaching: Ask a willing reader to locate a new multiple; record any actual trial and revision.

3 · Find the faulty trail

Could the gaps all be fifths?

MODEL marks lie at 0,1,2,3,4,10 distance units, with endpoint 10 representing 1 whole. The last gap is much larger. Explain why labelling all gaps 1/5 is invalid and propose equal marks 0,2,4,6,8,10.

Evidence/observation: Supplied geometric reasoning; units are invented diagram distances, not measured centimetres.

Specific next teaching: Return to an equal paper strip before another faulty-line comparison.

Short child start · Ordinary cues/full alternatives · Adult preparation

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