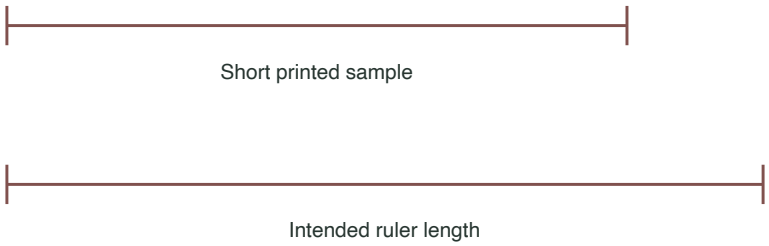
# Growth Chart Ruer



## Prompt

Task 1: A strip is printed and the calibration segment measures shorter than the real ruler beside it. State what has gone wrong and what to do before printing the full strip.




## Answer

The printer has scaled the page down, so the printed marks are closer together than the real distances. Correct the printer's scale setting and reprint the calibration segment until it matches the ruler, then print the full strip.

## Reasoning

A short calibration segment means the printed length is not the real length, so every mark on the full strip would be wrong. Fixing the scale setting first avoids wasting a long print.

## Check

Reprint the calibration segment and measure it again with the real ruler; it should now match before the full strip is printed.

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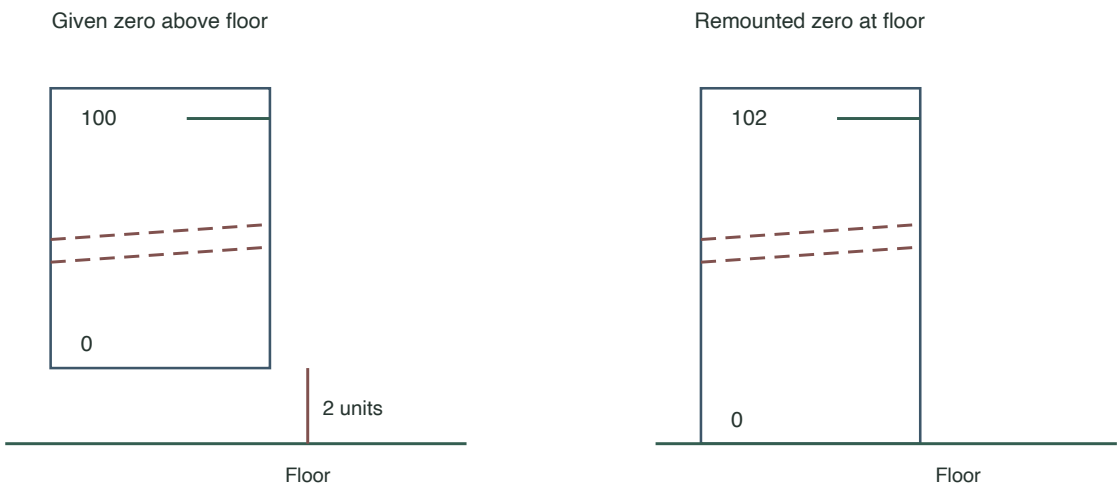
Task 2: A strip is mounted with its zero mark 2 units above the floor. A child is marked at the 100 mark. Explain why the recorded height is wrong and how to correct the mounting.




Scale break enlarges the floor detail.

## Answer

A reading of 100 omits the 2-unit gap between the floor and the zero. The marked height from the floor is 102 units, so the reading is 2 units too low. Remount the zero at the floor before reading again.

## Reasoning

A strip reads distance above its own zero. The floor height equals that reading plus the gap below the zero.

## Check

Add the 2-unit floor gap to the reading of 100. After remounting, check that no gap remains between zero and the floor.

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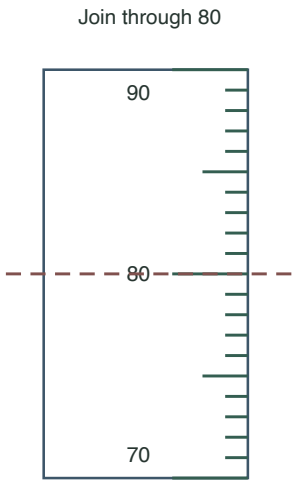
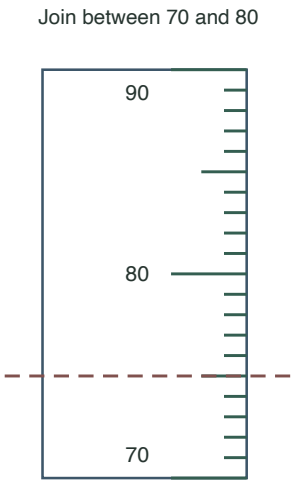
Task 3: A strip is printed in two pages joined end to end, and the join falls exactly through the 80 mark. Explain the problem and describe a better join placement.




## Answer

A join through the 80 mark splits the number and makes it hard to read, and the seam can shift the mark. Move the join to fall between numbered marks, for example between 70 and 80, so every number stays whole and readable.

## Reasoning

The join is a physical seam that can distort or split whatever is printed on it, so it should fall in a gap rather than on a numbered mark.

## Check

Look along the joined strip and confirm every numbered mark is whole and sits away from a seam.

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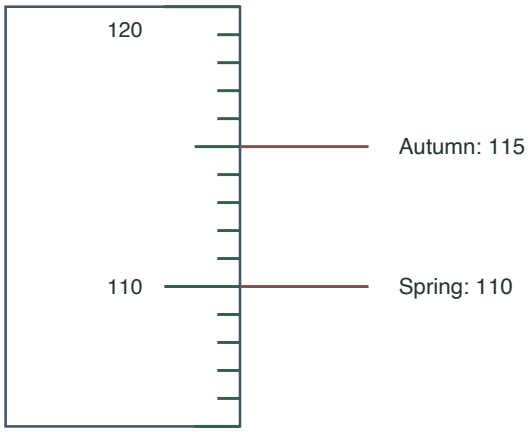
Task 4: A child is measured twice, once marked at the 110 mark in spring and once at the 115 mark in autumn. Describe how to record both so the chart shows growth, and state what the chart shows.




## Answer

Record each height as a dated mark beside the strip, for example 'spring: 110' and 'autumn: 115'. The chart shows the child grew 5 units between the two dated marks.

## Reasoning

Dated marks let a reader see change over time, which is the purpose of a growth chart; a bare number without a date does not show growth.

## Check

Read the two dated marks against the strip and confirm the later date sits at the higher mark.