

How Scale Changes a Map

Name _____

Date _____

Fill in the gaps so that the text makes sense.

Maps cannot reproduce every feature at its actual size. A map's _____ expresses the relationship between distance on the sheet and distance on the ground. For example, 1:25,000 means that one unit on the map represents 25,000 of the same units on the ground. Centimetres or inches may be used, provided the unit is identical on both sides of the ratio.

Confusingly, a smaller denominator indicates a larger scale: features at 1:10,000 are reduced less than those at 1:1,000,000. _____ therefore cover a smaller area on a sheet of a given size and can show individual buildings, field boundaries and minor roads. Small-scale maps cover wider areas, such as countries or continents, but include less local detail. 'Large' and 'small' describe the ratio, not the paper's physical dimensions.

Changing scale also changes representation. When a detailed road map is reduced to fit a national atlas, _____ is necessary. Cartographers must select, simplify or combine features so that the map stays legible. A winding road may become a smoother line, while several nearby buildings may appear as one built-up area. These symbols do not prove that the landscape has changed; they result from representing the same place at a different scale. A national map can reveal broad patterns, but a more detailed one is needed to locate a particular entrance or footpath.