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Knots in the classroom.
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From the text: Everybody knows what a knot is – we have all had to deal with a tangle of string. This in itself provides some motivation for the study of knots as a mathematical topic. But studying knots from a mathematical point of view also has real value in the classroom because it provides a pleasing contrast between the 'abstract' thought processes involved and the 'concrete' nature of such examples. Of course, it would be helpful if it were possible to classify knots in some way. We wish to ask questions like "are two knots the same?", "is the trefoil knotted?", "is a knot the same as its mirror image?" Answering these questions would assist with classification, but they are also interesting in their own right. However, providing answers is far harder than you might think; we shall answer only one of them here, as a way of showing the types of approach mathematicians use. Mathematicians define two knots to be equivalent (or simply the same) if one can be deformed into the other. Studying knots is made much easier by projecting them onto a plane. The result is called a knot diagram and this is also where the first difficulties come in, because one and the same knot can have many different knot diagrams. How are all these diagrams related?

Classification: H70 G90 I90 K30
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