

## Who taught me that?

I was marking the other day, and chanced across this, in a rather disorganised script by a student called Jack:



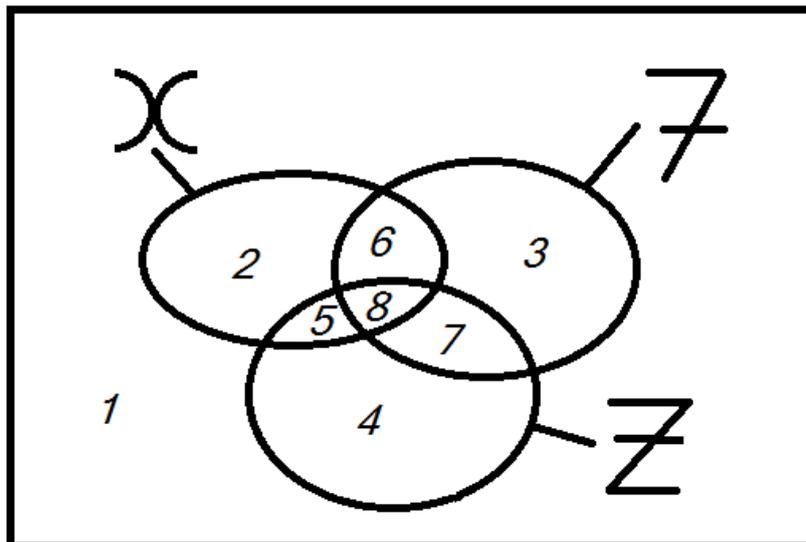
I stopped, puzzled. Had Jack needed a diversion midway through his tough trigonometry assignment, and turned to draft a love letter to his inamorata? But then I worked out what was happening – Jack's intention was to write this:



So Jack was writing his 'letter-x's and his 'times-x's in the same way. I thought back, and dimly recalled a time when I'd done the same – maybe forty years ago? Who was it who'd passed on the wisdom that 'letter-x's were better written as two semi-circles? The effort of memory was too great; I silently thanked the ubiquitous teacher Anon.

So what else comparable was there in my mathematical makeup? I thought of the numeral '7' – I always put a line through it, to differentiate it from the digit '1', and likewise with my 'letter-z' (to distinguish it from '2'). But these foibles seemed to me more optional than writing an 'x' with two half-circles. I drew up the following Venn diagram:

*All ways to write Ex, Seven and Zed*



I found myself positioned squarely in region 8 – where would my students be? Studying Jack’s homework placed him in region 1, and I would gently suggest next time that he migrated into the ‘x-as-two-half-circles’ bubble at least.

The next time I had the group, I did a survey. We had lots of ‘x-as-two-half-circles’ (‘We were taught that at primary school!’), a smattering of ‘seven-with-a-line’ people, while I was almost on my own with my ‘z-with-a-dash’ option.

What is second nature is hard to question. I am not sure in twenty years I’d ever stopped to consider that how to write the letter ‘x’ deserved at least ten seconds of the A Level course. It made me wonder – what other symbols do I use without stopping to bring everyone on board? When asked, my students were keen to help. It transpired I abbreviate ‘positive’ to ‘+ve’ and ‘negative’ to ‘-ve’. For the vast majority, my shorthand was crystal clear, but those who skipped it, thinking ‘Jonny will explain that in a minute’, would have been disappointed. And then a symbol that could have been my own invention:



Well, ‘perpendicular’ is such a mouthful. But had I stopped to explain this to every class I taught, every time? In the heat of a difficult day with a mind full of ten different things, I knew I had not.

So the moral of this tale is not complicated – if we don’t put ourselves into our students’ shoes, then it is unlikely that anyone else will. And may we all be grateful to those teachers who improved our mathematics in ways that stay with us, but who are long forgotten.

*Jonny Griffiths teaches at Paston College in Norfolk. Possible claims to fame include being an ex-member of Harvey and the Wallbangers, a popular band in the eighties, and playing the character Stringfellow on the childrens’ television programme Playdays.*