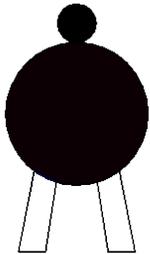


Seeing mathematics education in George Eliot's novels

Derek Ball, School of English

Q1



Moon diameter:
2159 miles

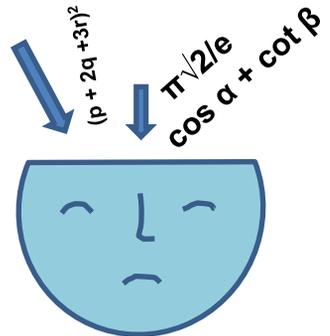
Earth diameter:
7926 miles

'Mr Casson's person was by no means of that common type. On a front view it appeared to consist principally of two spheres, bearing the same relation to each other as the earth and the moon; that is to say, the lower sphere might be said, at a rough guess, to be thirteen times the upper.' (*Adam Bede*)

So the question is: Why 13?

The Victorian novelist George Eliot was an able mathematician. When she came to London at the age of 30 she enrolled herself on a geometry course running every Monday and Thursday; during the previous year she spent seven months in Geneva, where she studied mathematics every day. Eliot was passionately interested in mathematics and mathematics education, particularly for girls. In her novels she makes frequent reference to maths and learning maths. These four examples are from Eliot's first two novels and demonstrate, both Eliot's feel for education, and also her opinions about what mathematics should be learnt and how.

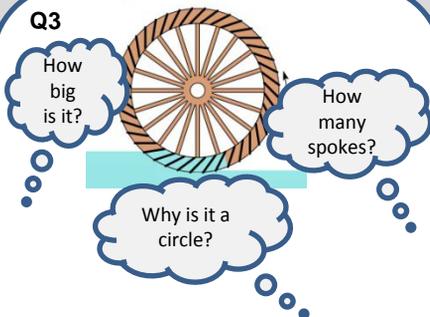
Q2



'Why, sir, you seem to think o' college something like what Bartle Massey does. He says college mostly makes people like bladders - just good for nothing but t'hold stuff as is poured into 'em.' (*Adam Bede*)

Is mathematical Adam a bladder?

Q3



'That little girl is watching it too; she has been standing on the same spot ever since I paused on the bridge ... rapt in its movement.' (*The Mill on the Floss*)

Is Maggie idly dreaming or is this intelligent learning?

Policy Advice for the Education Secretary

P1 Give learners problems to solve and don't tell them how to solve them.

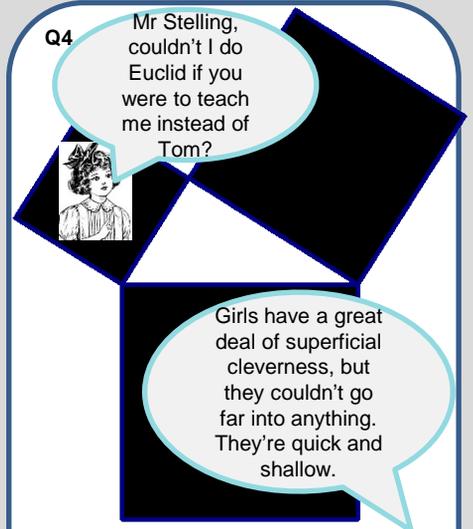
P2 Minimise didactic teaching and repetitive drill.

P3 Allow learners to 'waste time' thinking.

P4 Avoid gender stereotyping and encourage girls to pursue maths and science.

If you don't want children to approach mathematics lessons with disgust and loathing, Ms Morgan, read George Eliot.

Q4

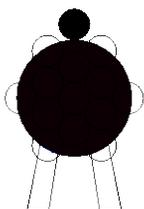


(*The Mill on the Floss*)

Is Mr Stelling right?

Answers

A1



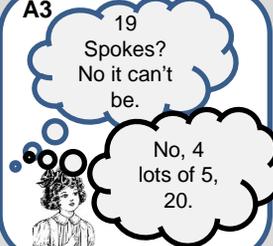
A2



Adam 'often calculated the height and contents of a trunk to a nicety'.

Bladders can't do this!

A3



A4



George Eliot

A woman who certainly could do Euclid. Mr Stelling is definitely not right.