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Keith Devlin* (devlin@stanford.edu). *What exactly is "doing math"?* Preliminary report.

Tim Pennings' now famous dog Elvis is almost certainly a good path optimizer, under certain circumstances, but surely does not really "do calculus". On the other hand, it's hard to describe the amazing pathfinding activities of the Tunisian Desert Ant as anything other than path integration. (Both examples are described in my recent book *The Math Instinct*.) The serious questions such examples raise are (i) what *does* constitute "doing math"? and (ii) what do we want the *average* child to learn from his or her mathematics education? (Received March 07, 2006)