Re: How to solve (2x + 3y)^3?

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- *From*: Robert Low <mtx014@xxxxxxxxxxxxx>
- *Date*: Thu, 29 Sep 2005 09:23:46 +0100

dwwdkddb wrote:

> I think you're neglecting the number of operations
> involved in computing the binomial coefficients
> to make this argument. You have 3C0, 3C1, 3C2 and
> 3C3
> to compute,(quite a few multiplications and
> divisions
> there) as well as the various powers of 2 and 3
> to multiply together.

Like I said, the binomial coefficients

can be most easily had from Pascal's triangle
(just involves a few additions). You're probably
right about the powers of 2 and 3, but I guess
anyone reasonably well−versed in arithmetic
knows the first few by heart. (I for one know
them up until 2^10 and 3^5.)

Sure: knowing the answer in advance always
makes it easier :−)

But now you're asking somebody to learn the
binomial theorem, and know a relationship
between the biniomial coefficients and
Pascal's triangle, all of which saves maybe
a couple of multiplications at the expense
of obfuscating what they're actually doing.
And even with all that, I doubt whether I'd
be significantly faster to work out (2x+3y)^3
with the binomial theorem than by just
multiplying out.

For a cubic, it's a sledge−hammer to crack a
nut. That's not to say that the sledge−hammer
doesn't have its uses, and once you have
the sledge−hammer and have practised a lot

with it you can use it for a nut−cracker.

But I'm willing to concede that just which
tool is the best for the job depends on the
person using it as well as how much they
practise with it, so I'll stop niggling away
at this now.
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