Observations on Factoring Using the GNFS

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iSEC Partners

Session ID: xxx-xxxx

Session Classification: xxxxxxxxxxxx

RSA CONFERENCE 2012

How Do I Factor - GNFS

1. Polynomial Selection
2. Sieving
3. Combine

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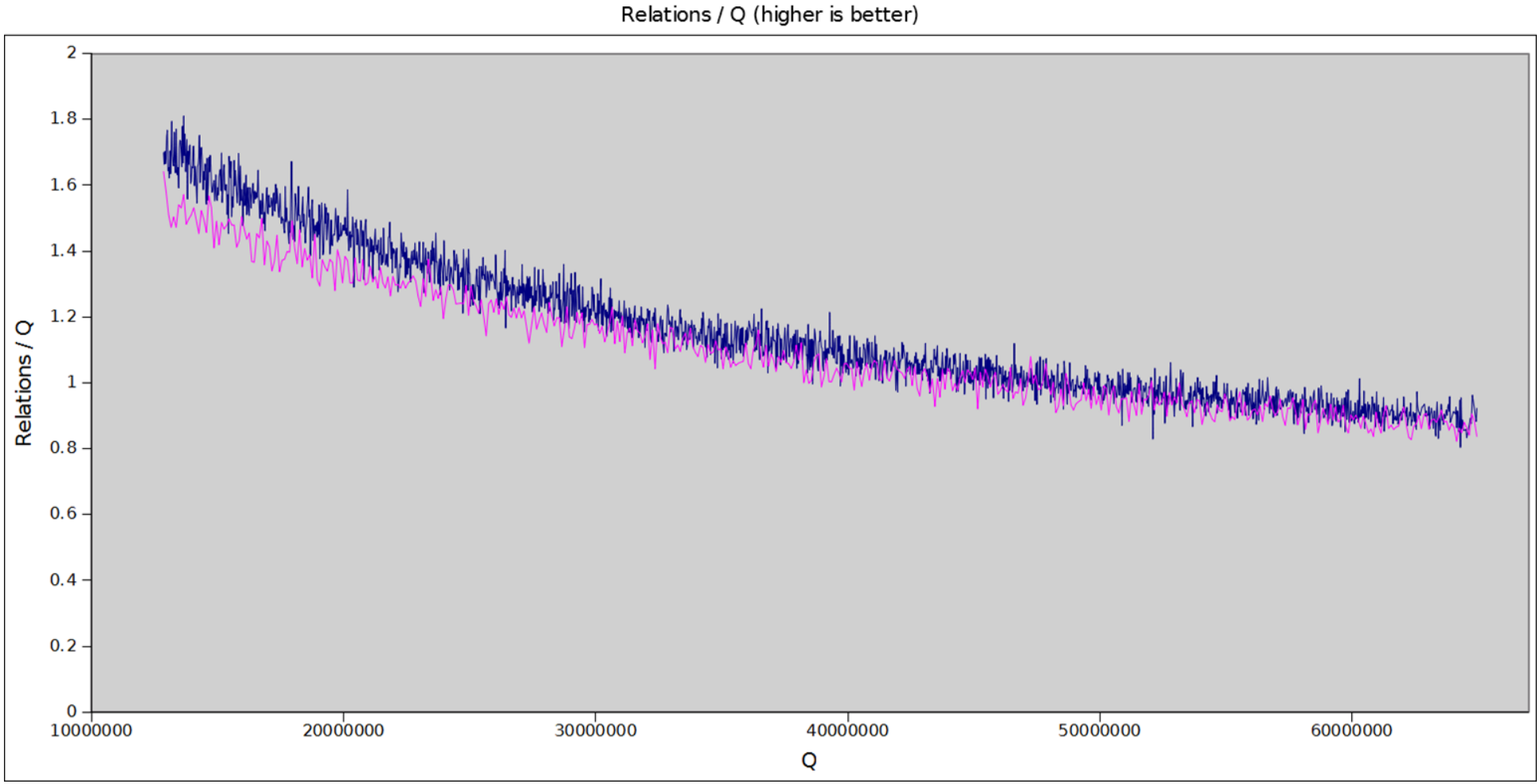
Slow & Unparallelizable

512 Bit ~8 Core-Days
768 Bit ~155 Core-Years*

Some Details on Factoring

- Polynomial Selection
- Siever Comparisons
- Oversieving

Misconceptions about Polynomials



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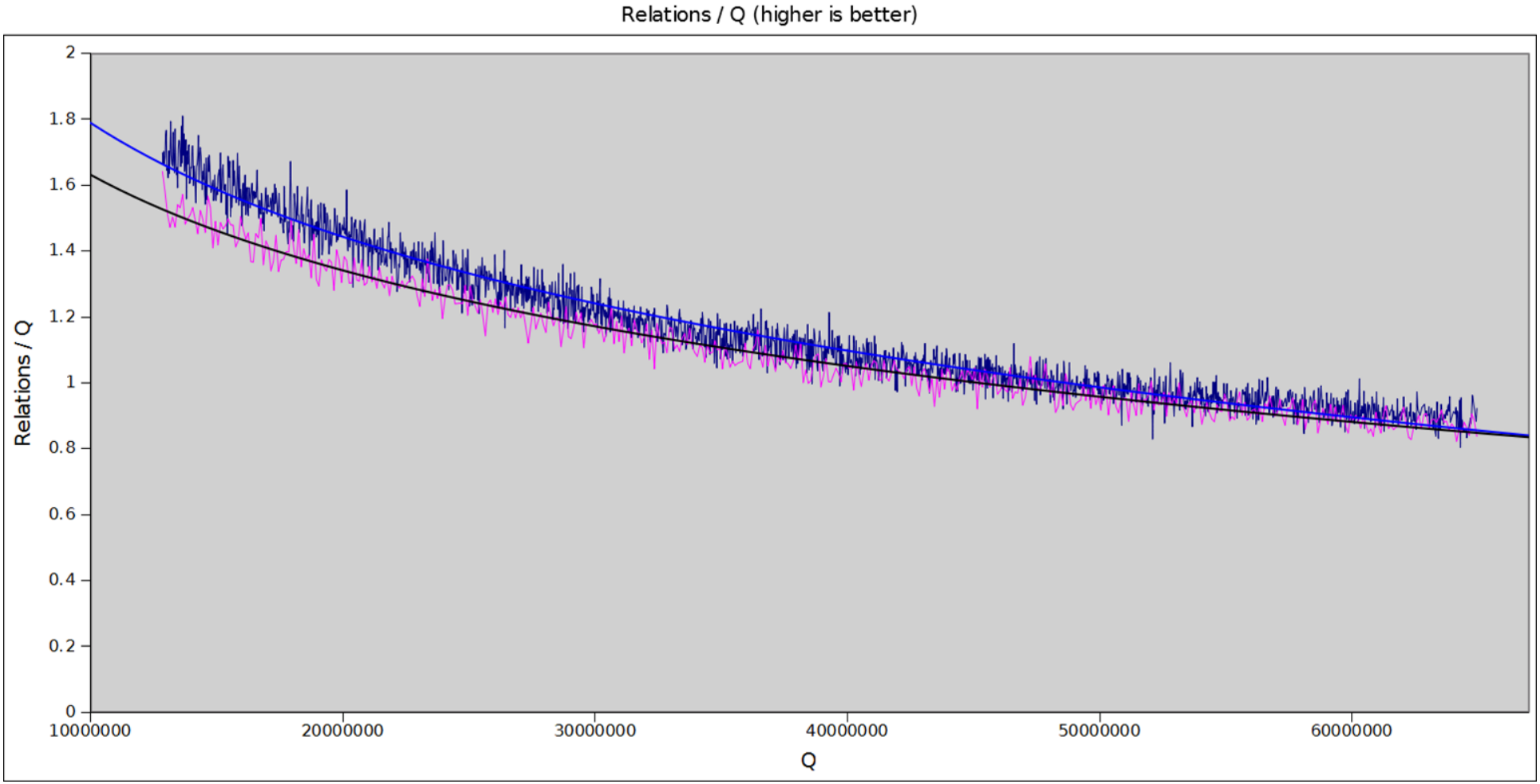

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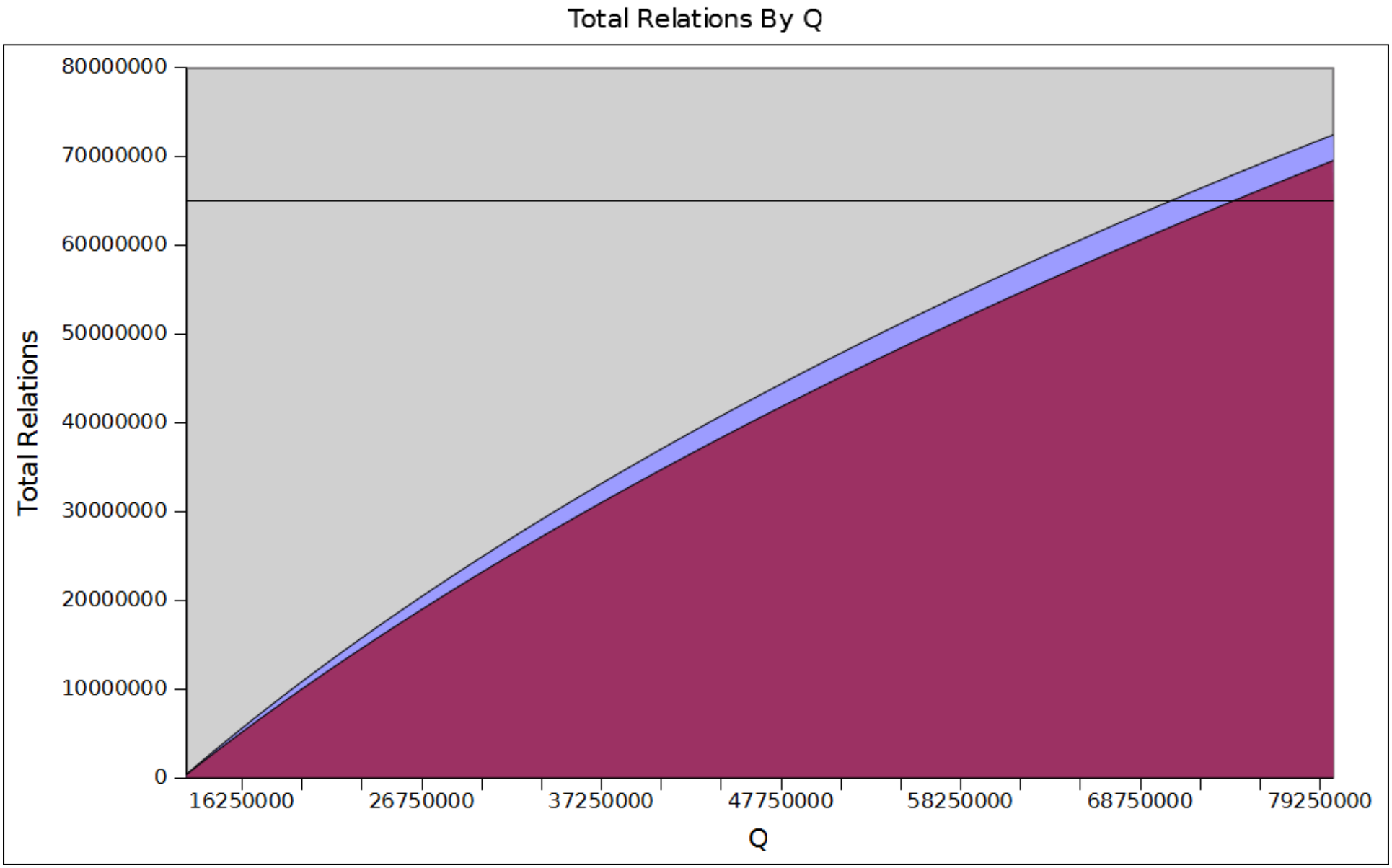

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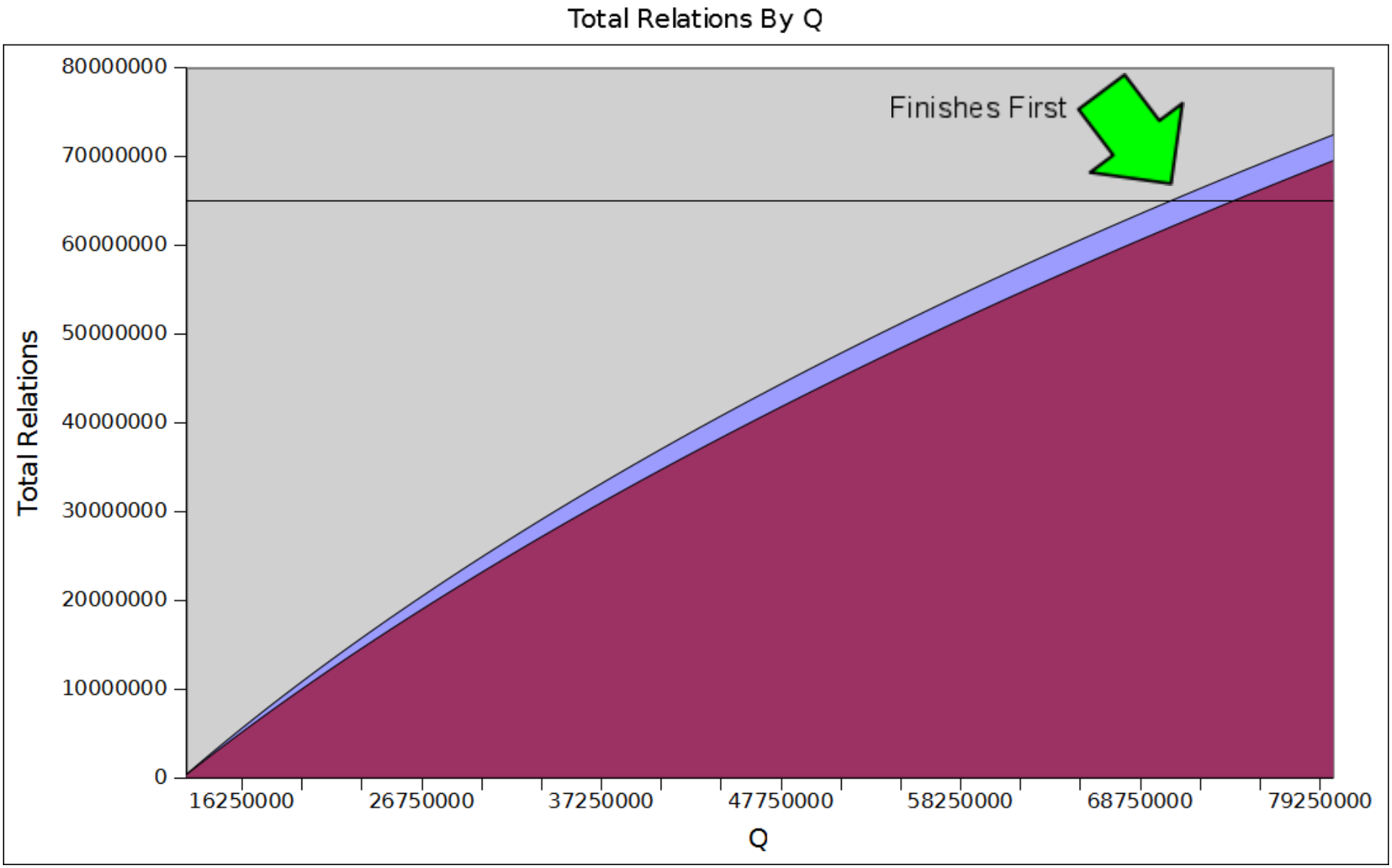

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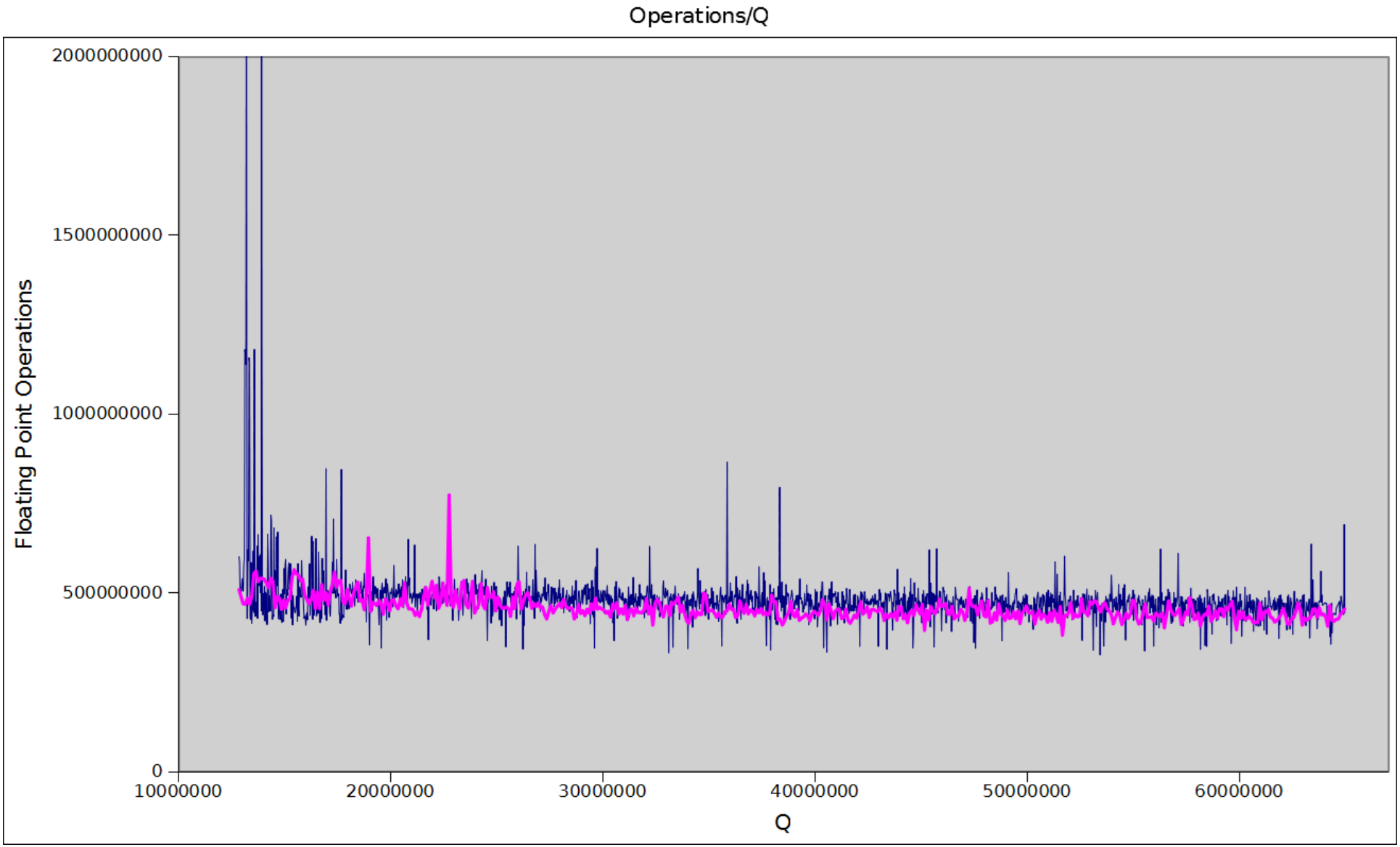

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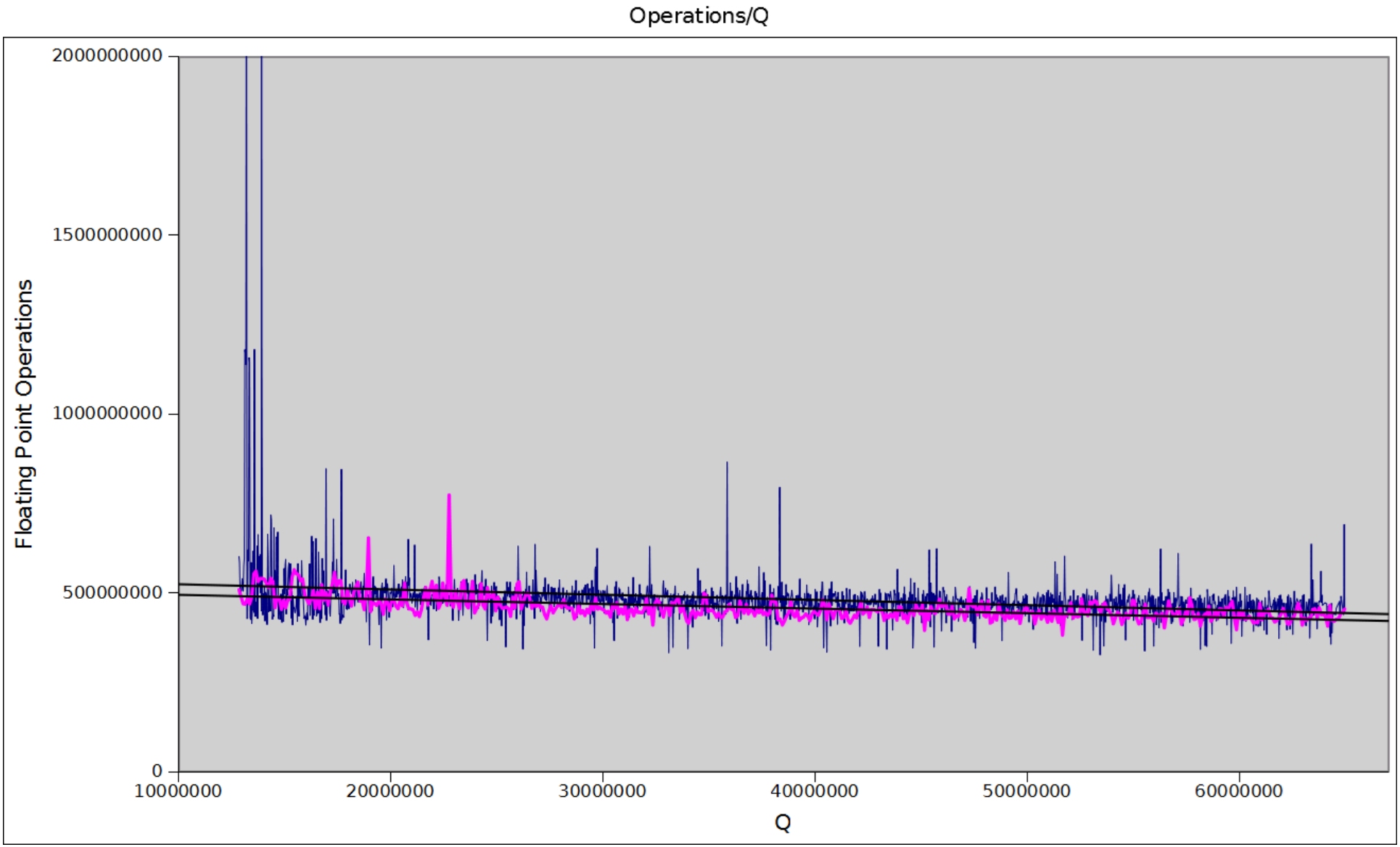

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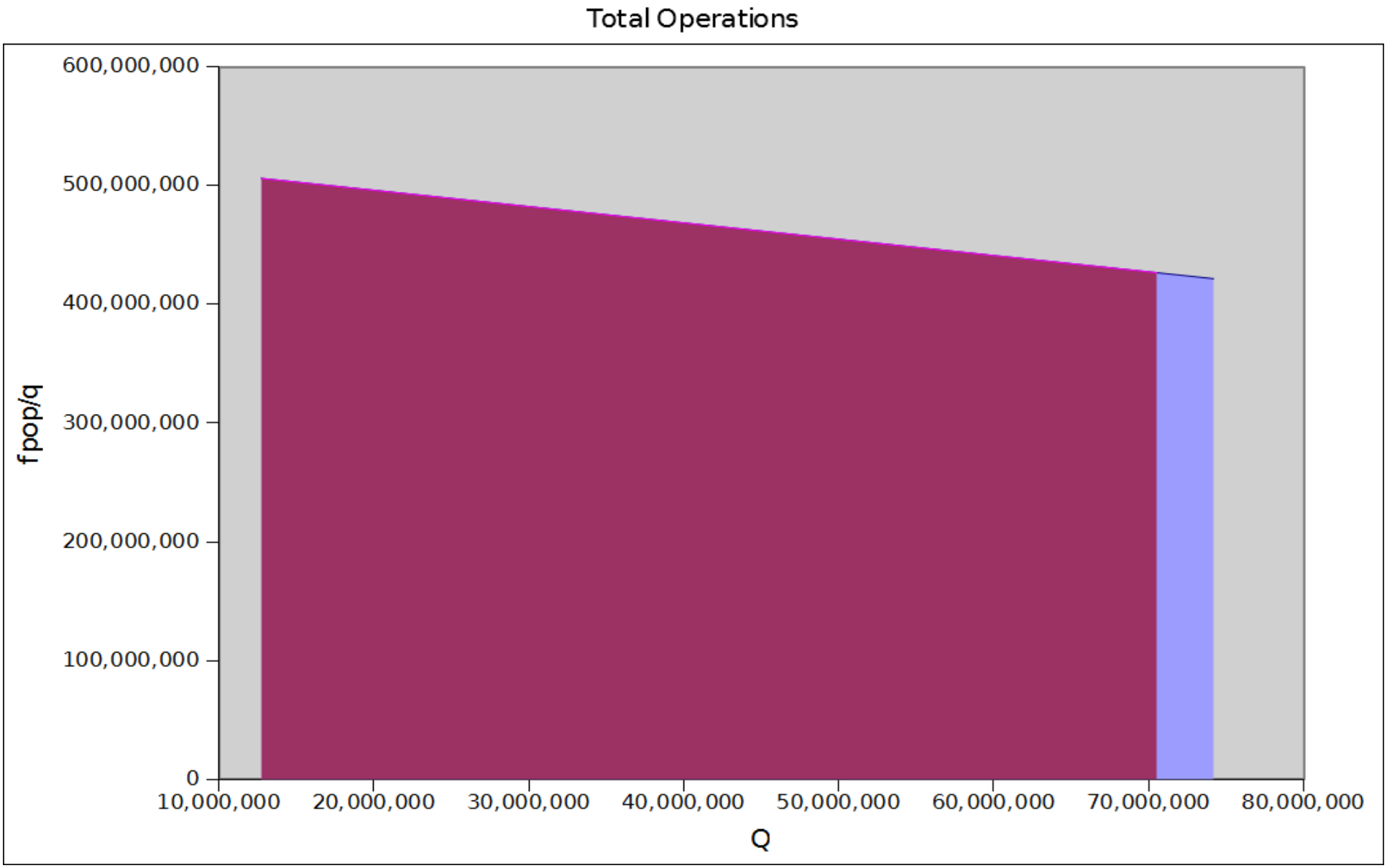

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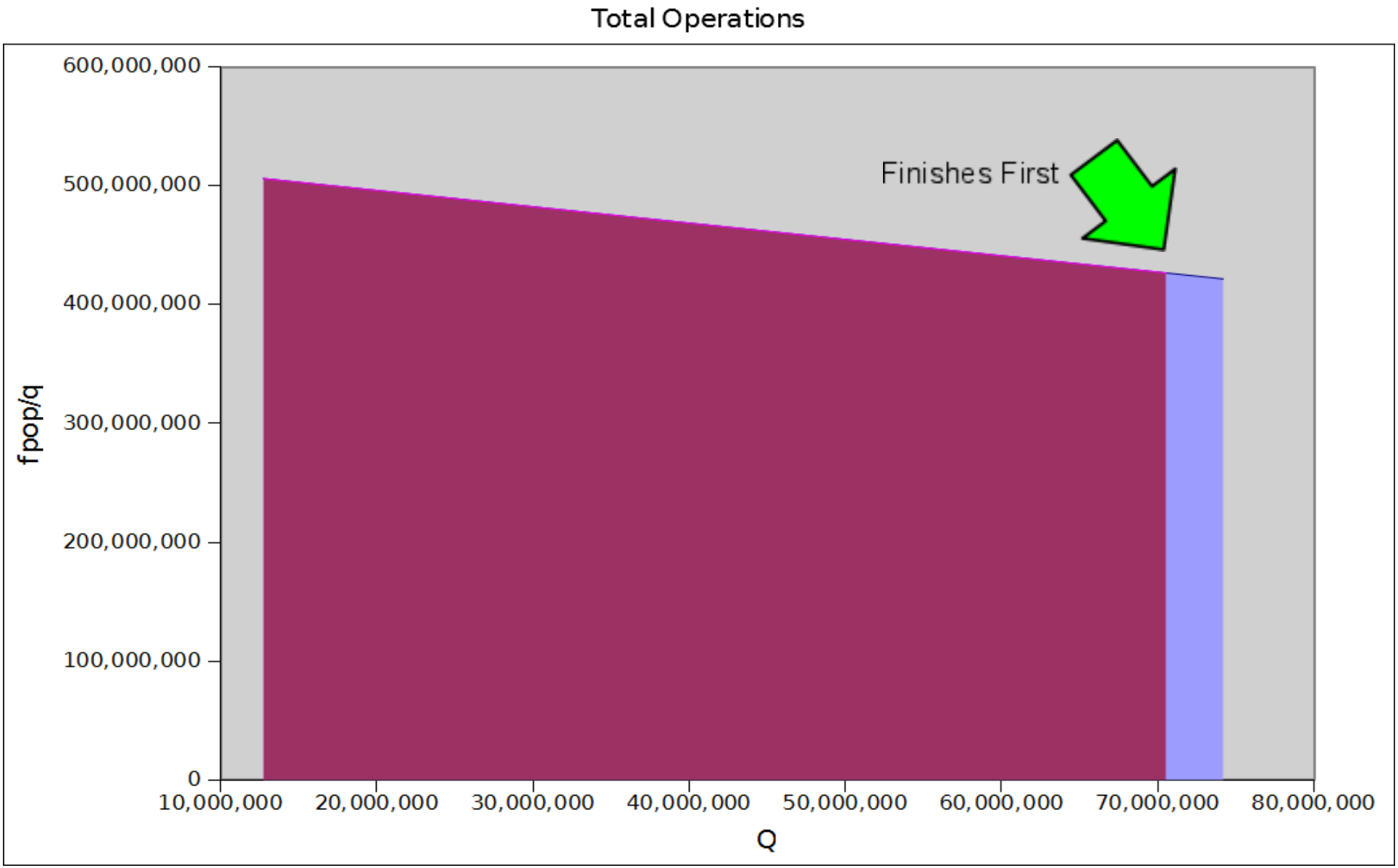

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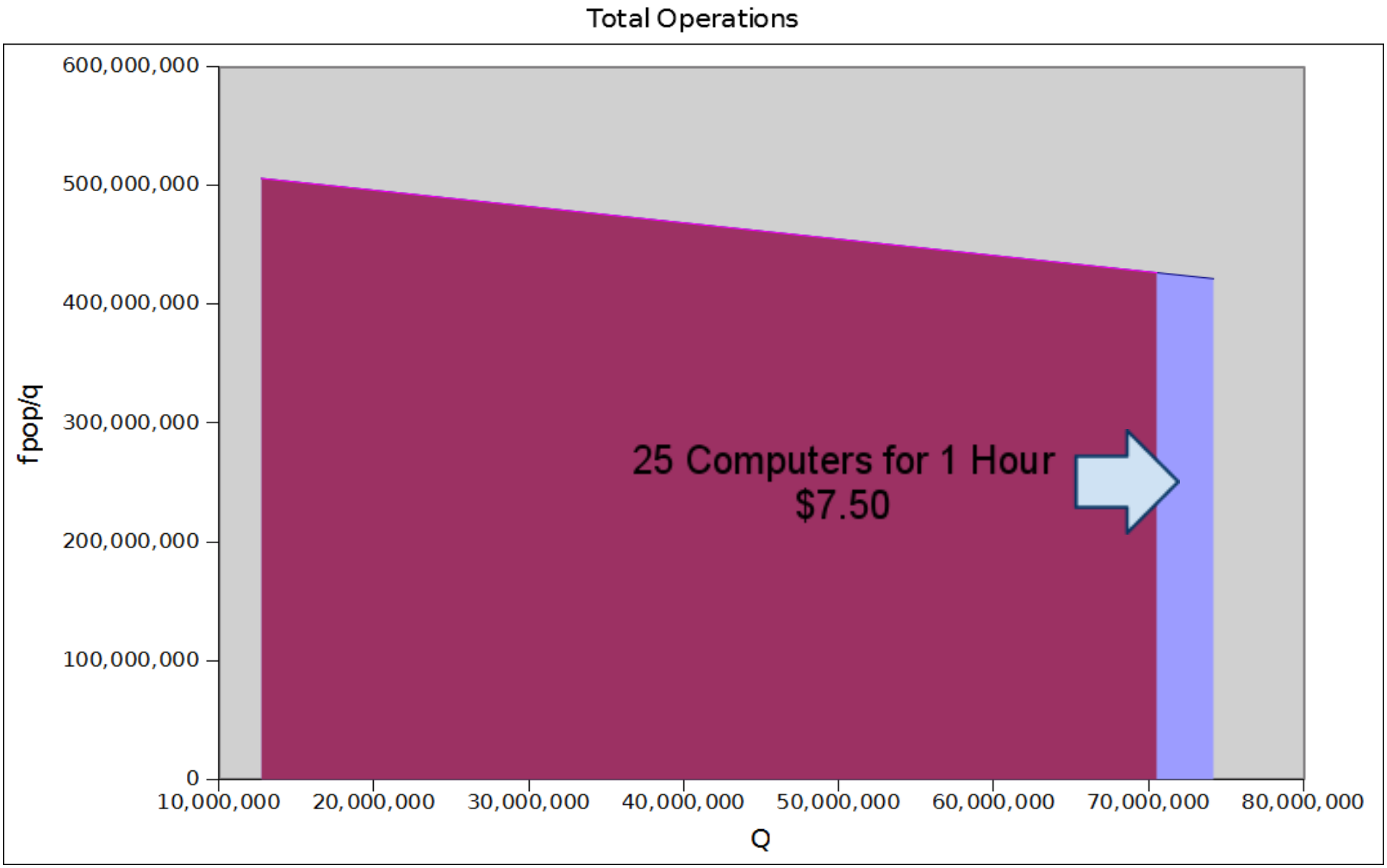
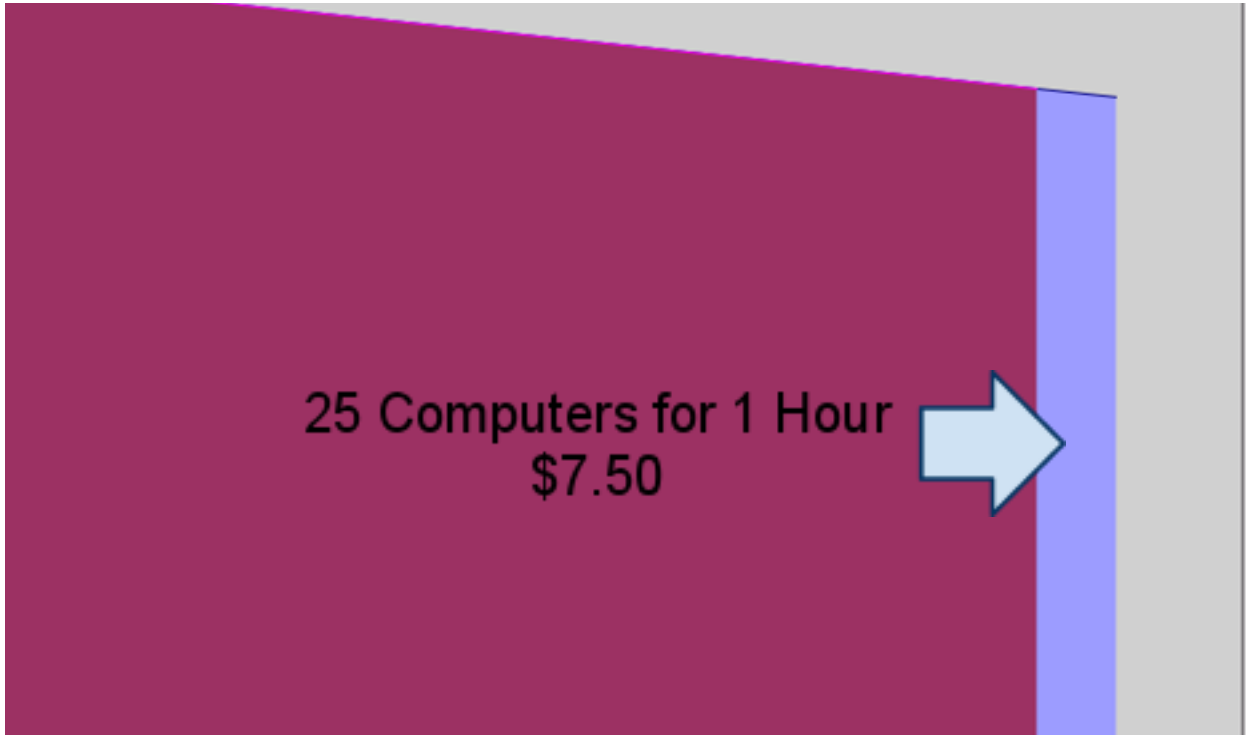


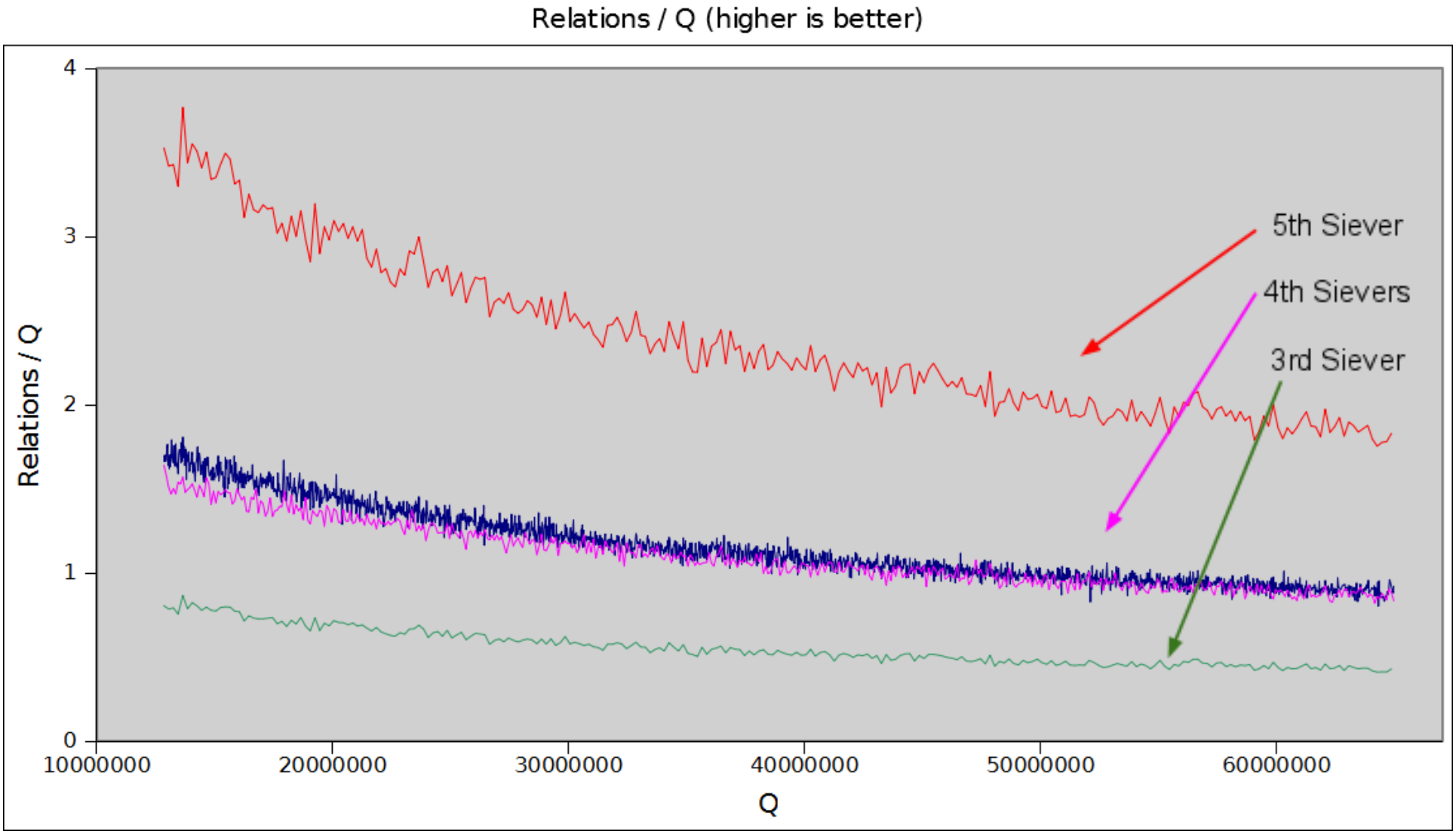
Misconceptions about Polynomials

If time is more valuable to you than (not much) money it is in your best interest to take the first polynomial you get and sieve with that, rather than doing another poly-selection run.



(this advice is only
for 512-bit semiprimes.)

Siever Comparisons



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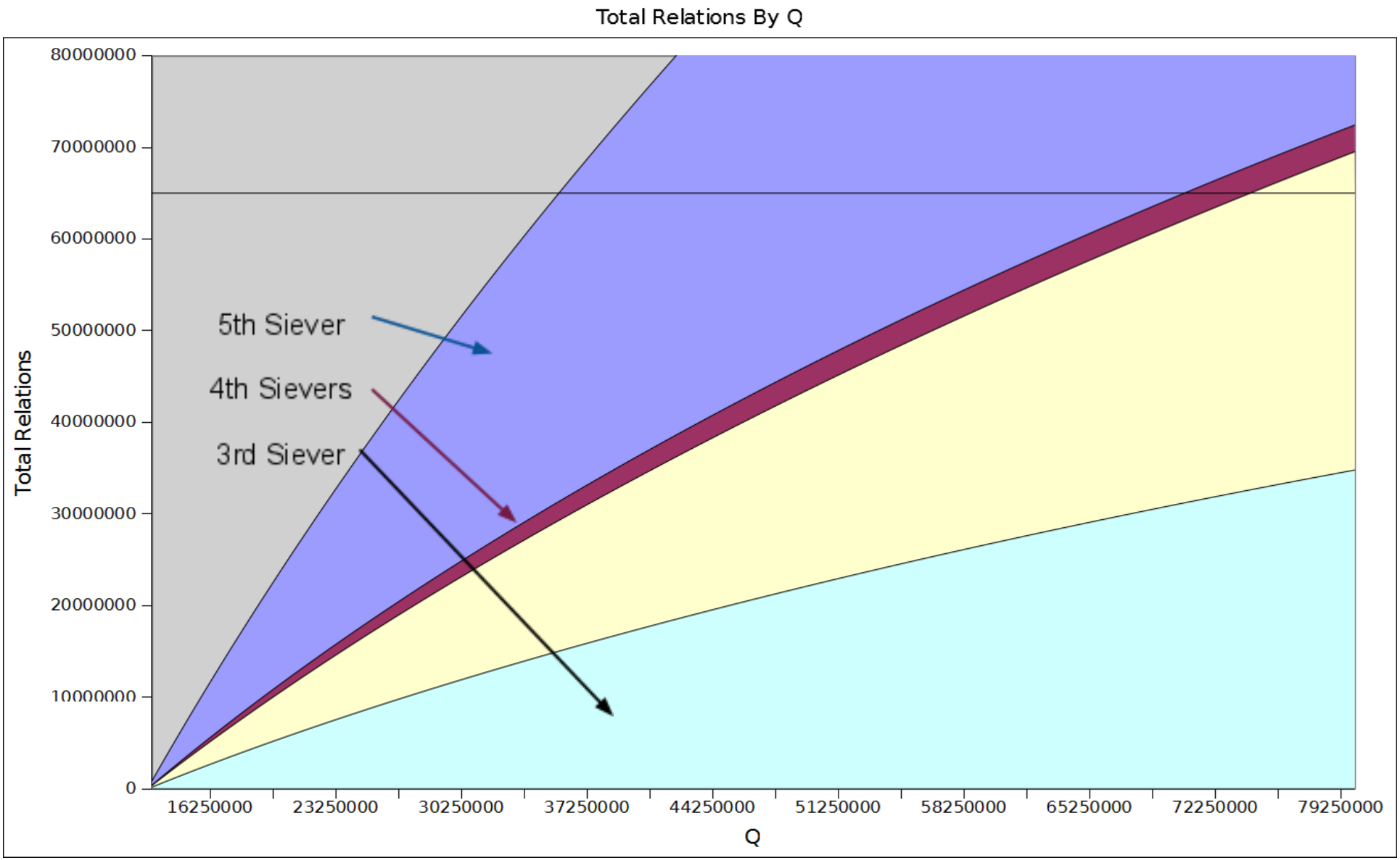

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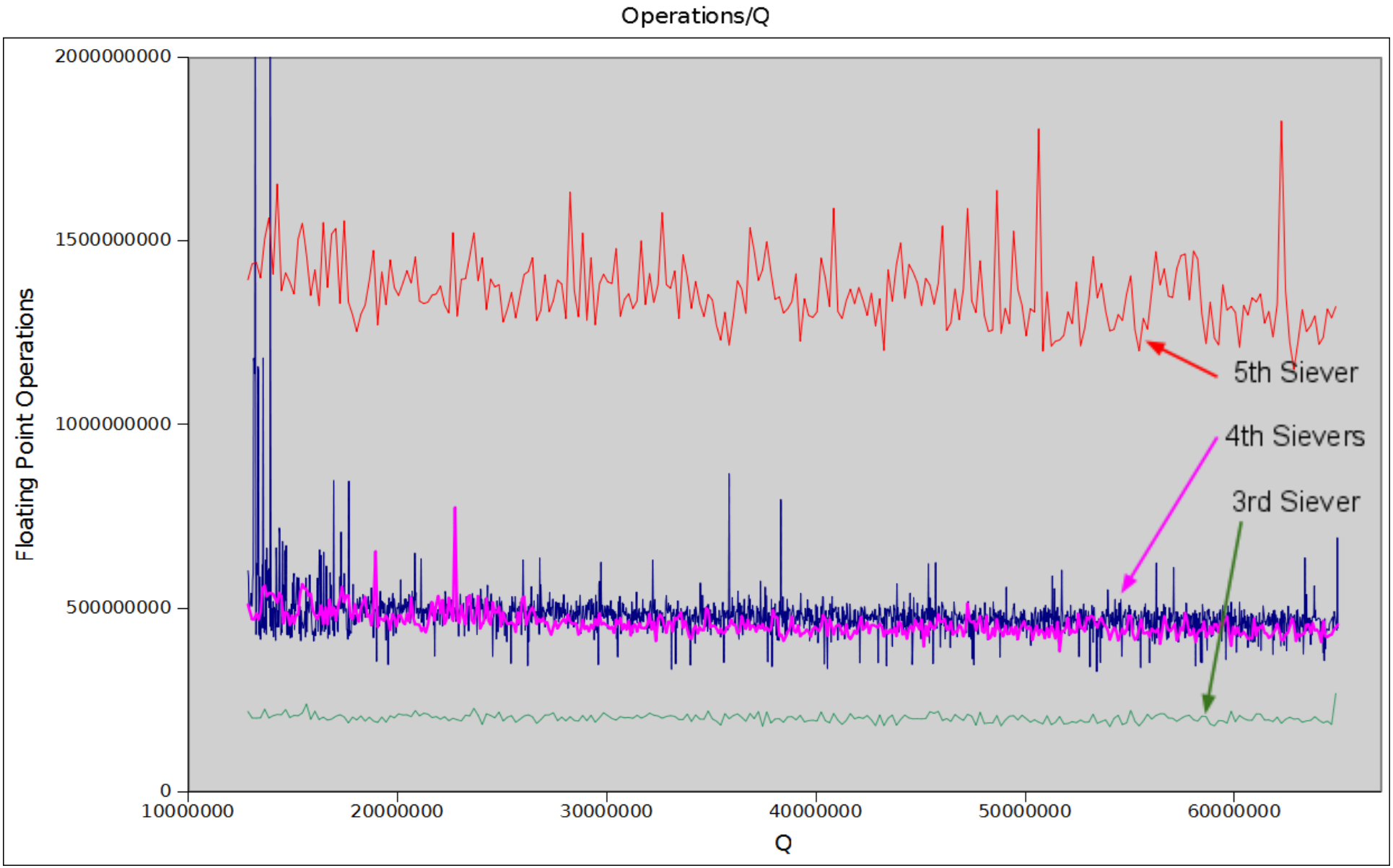

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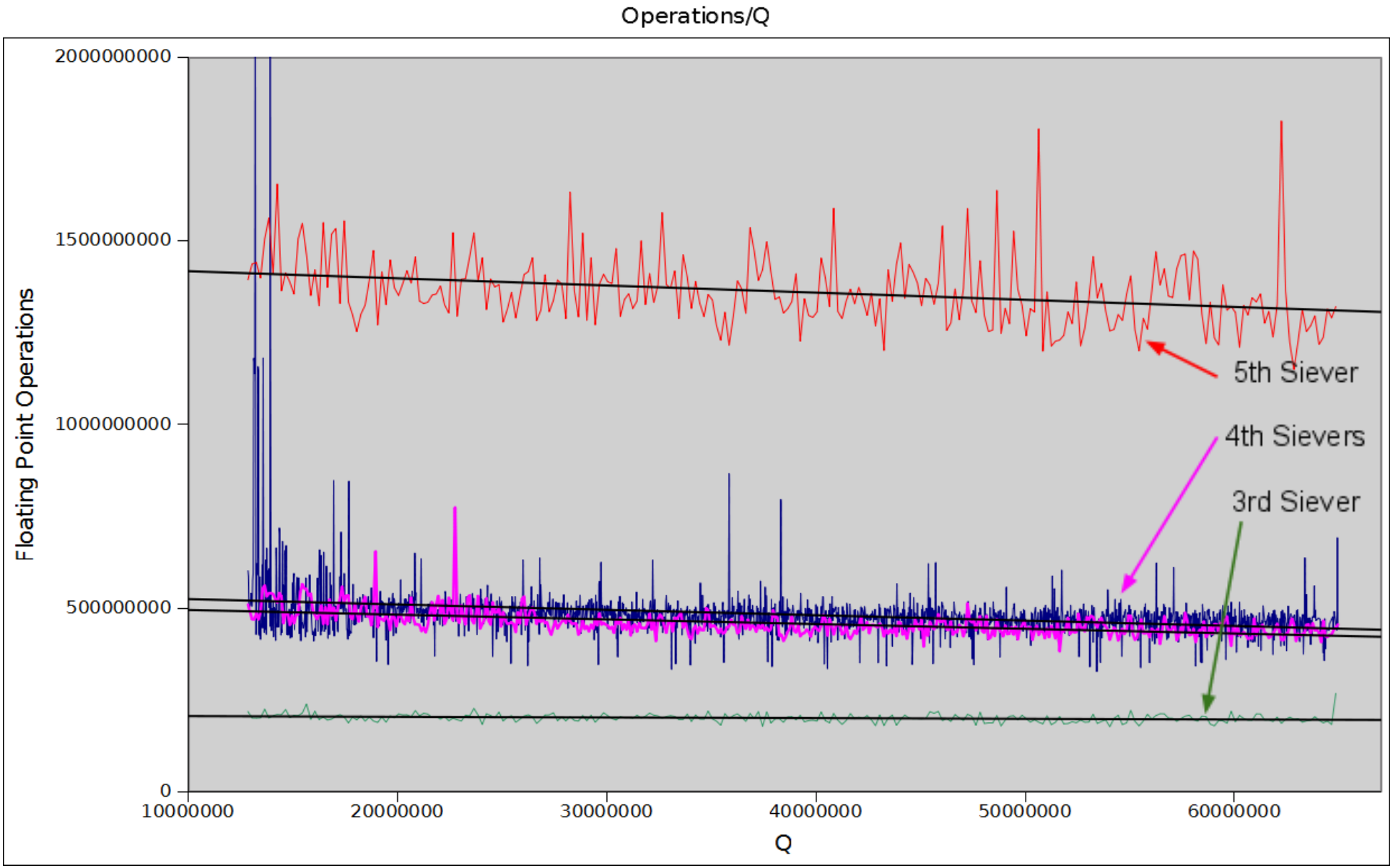

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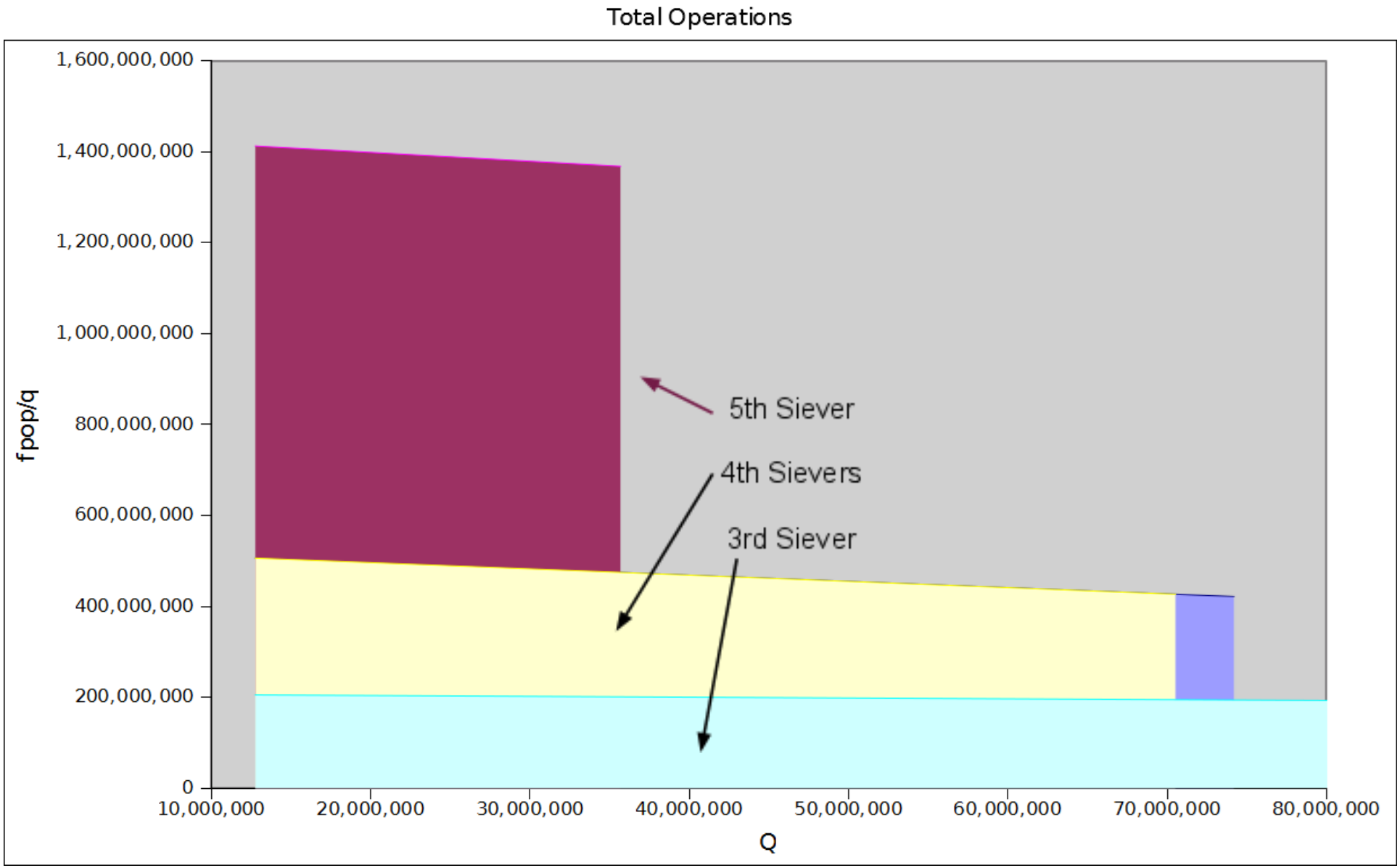

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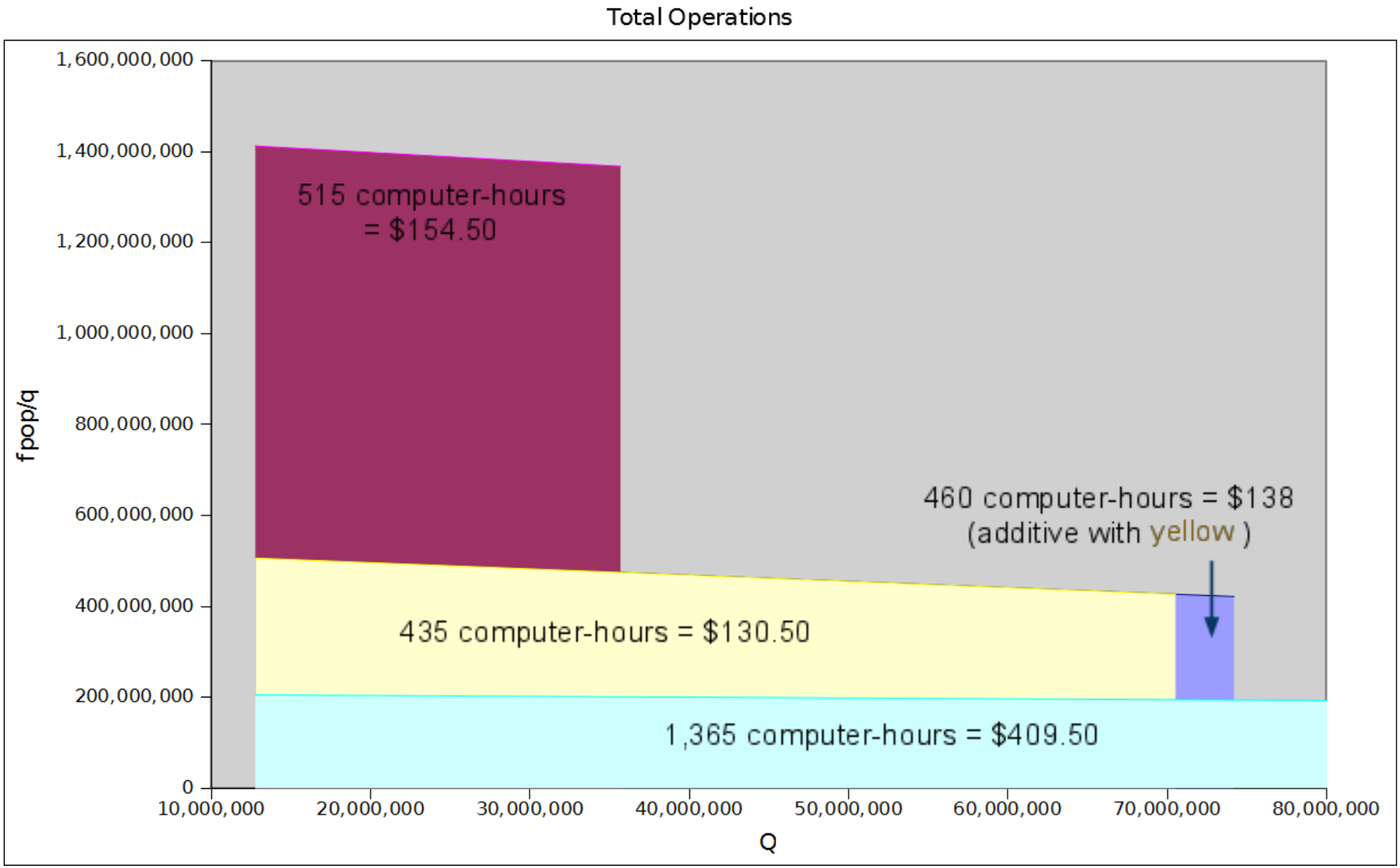
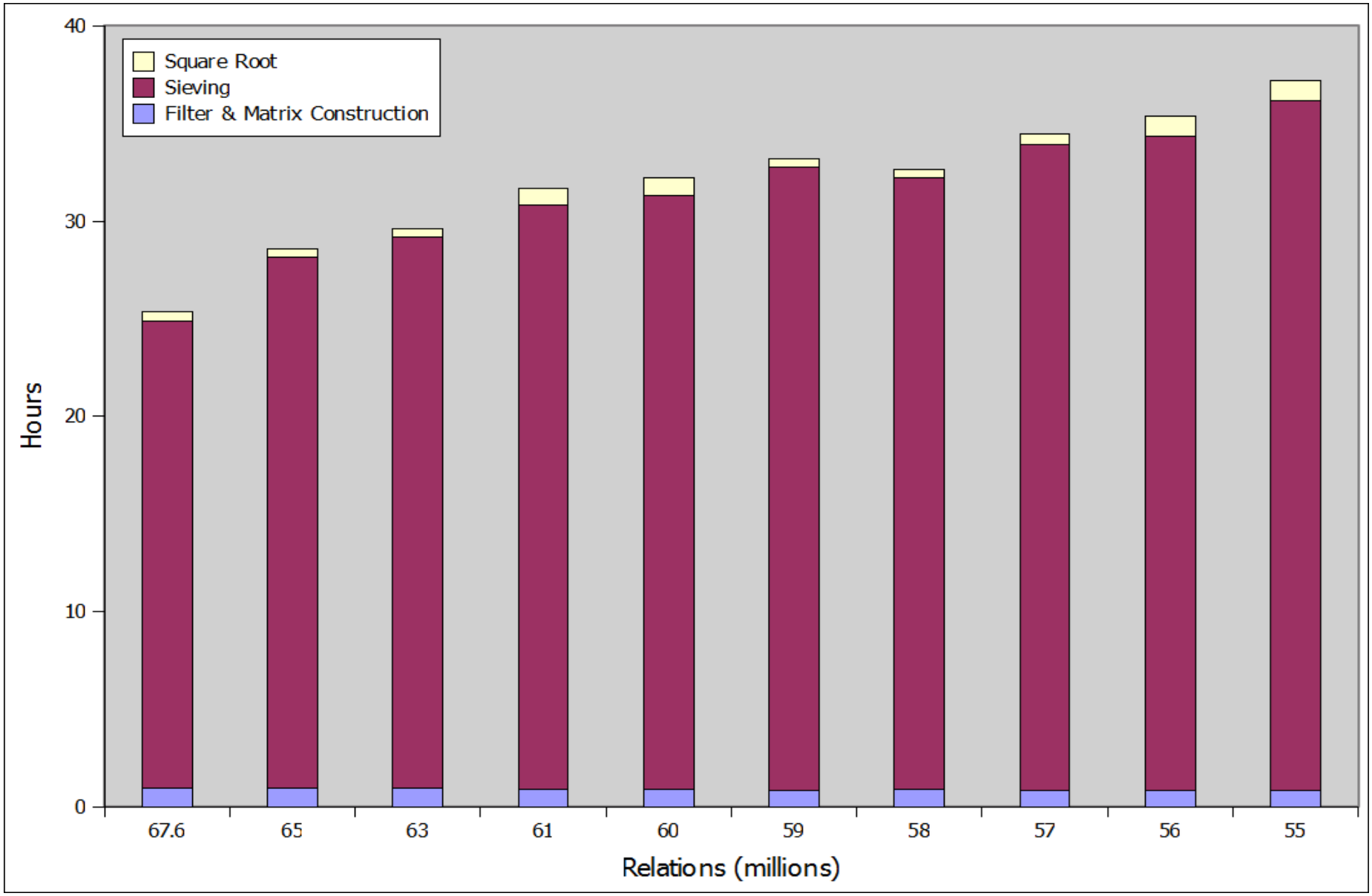


Oversieving



Obligatory Ending Slide

Fin

Thanks:
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- Gotham Digital Science
- NYSec
- MersenneForum & jasonp

Tom Ritter

Big Ups To:
- jasonp

http://www.isecpartners.com/
https://github.com/tomrittervg/cloud-and-control