



Lesson From America

SMC Conference
Saturday 5th March 2011

Nevil Hopley

PT Maths
George Watson's College
Edinburgh

This talk will have a....

Beginning

Brief outline of the American experience.

Middle

Showcasing lesson activities.
And some hands-on stuff.

End

Will come too soon!

And you can download all that you see today from

www.CalculatorSoftware.co.uk/smc

“The 2010 Anja S. Greer Conference On Secondary School Mathematics, Science And Technology”

Stirling SMC Conference, Scotland

1 Day only.

You can attend 4 standalone workshops.

That's it.

Anja S. Greer Conference, USA

5 Days long.

Choose two courses to follow over the 5 days.

Each course has a 2 hour workshop each day.

You can also attend 4 other standalone workshops each day.

Activities from the Courses

Geometer's Sketchpad

Noisy Graphs

TI-Nspire

Max Box & Max Cone

Warehouse Problem

Two or Root Two

Teaching Maths Using Computer Algebra Systems

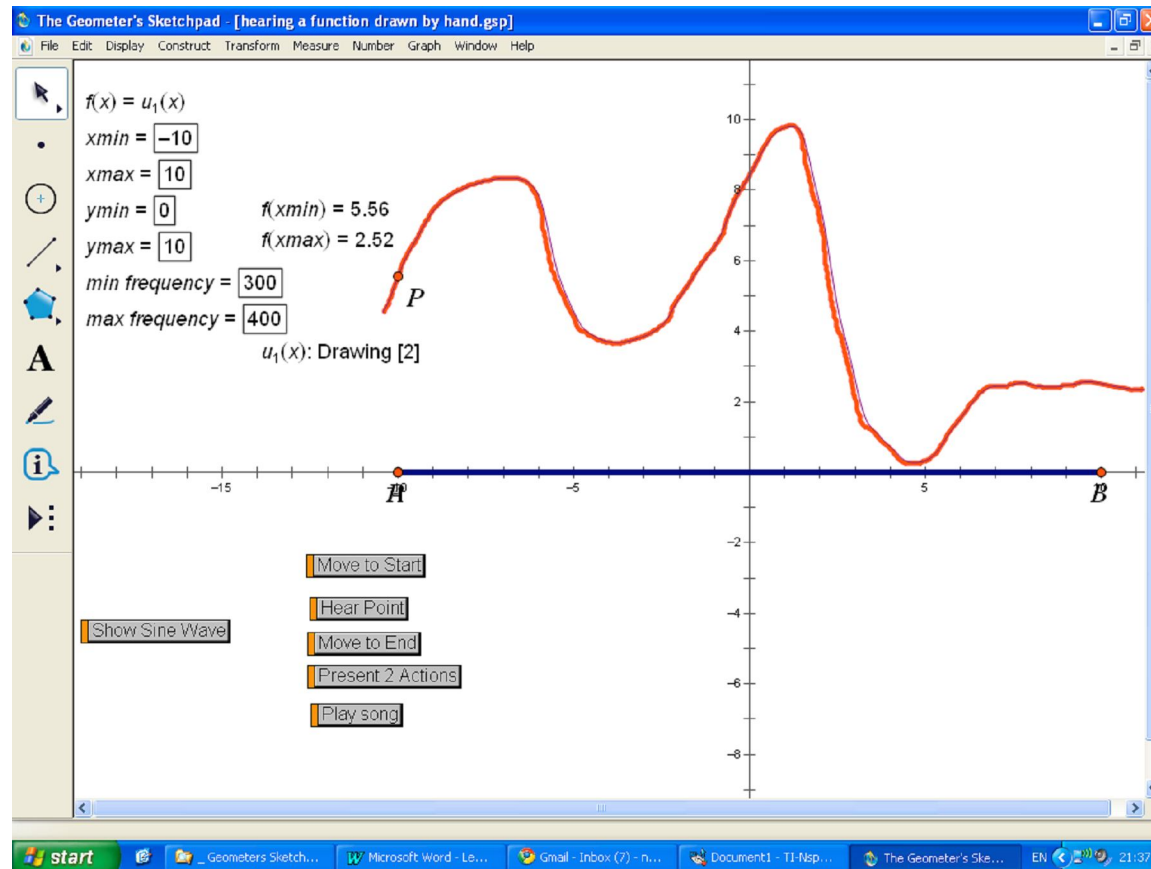
Activities from the Standalone Workshops

TI-Nspire

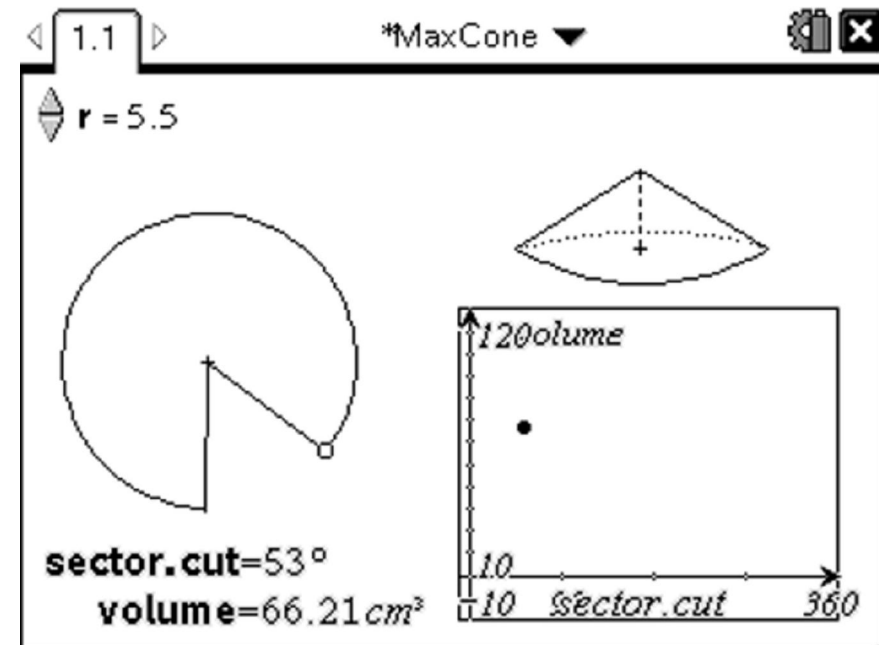
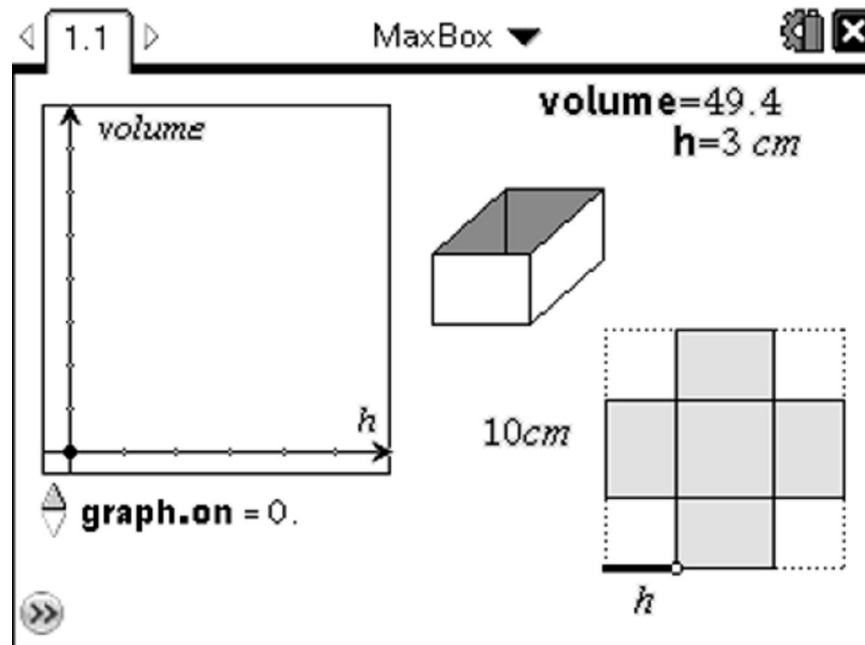
Parabolic Reflectors

Parabola Tangents

Noisy Graphs

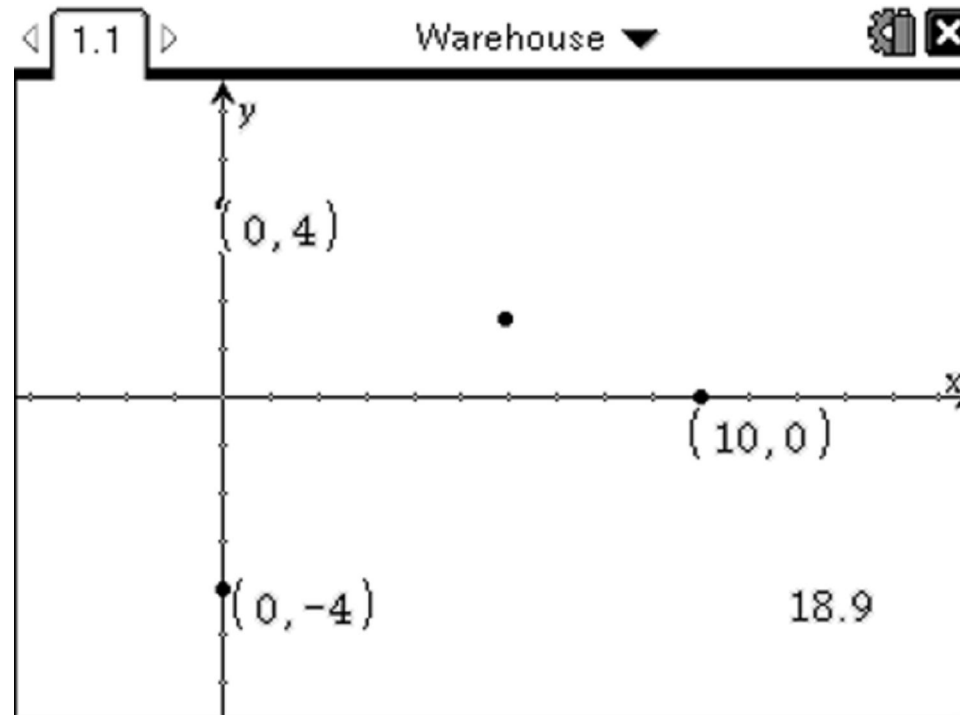


Max Box & Max Cone



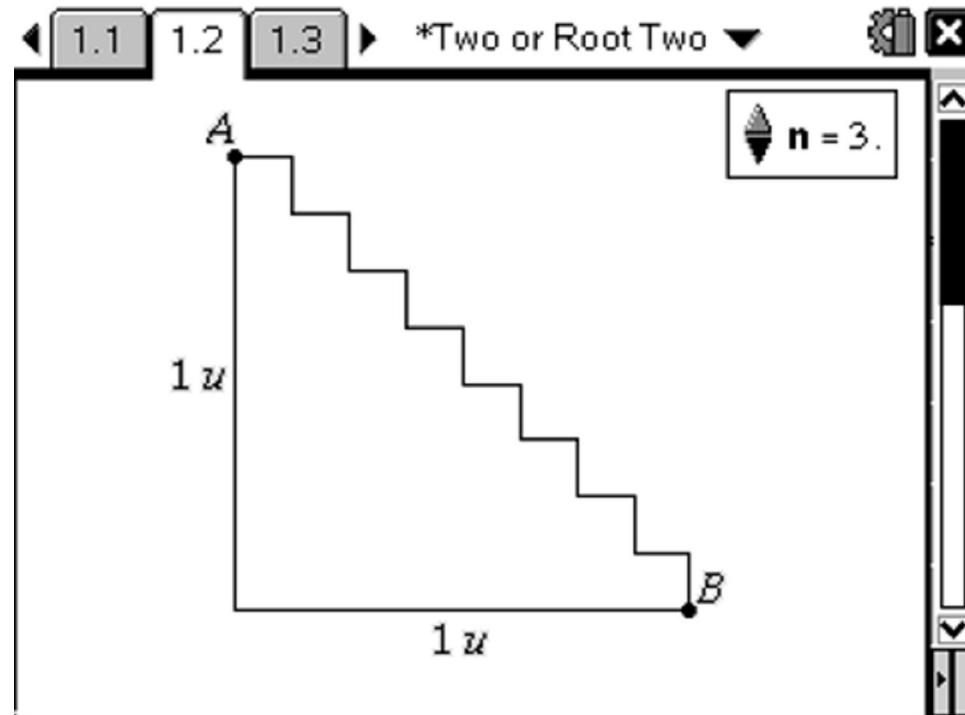
An old favourite ... and a new variant!

Warehouse Problem



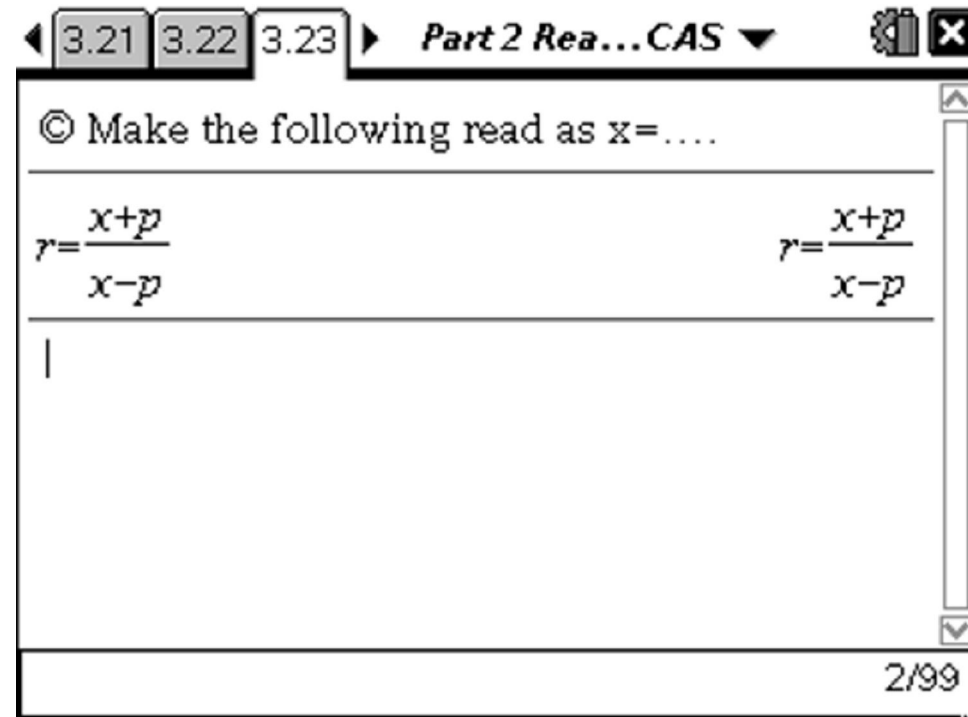
Optimise the location of a warehouse to be the minimum total linear distance from 3 outlets.

Two or Root Two



When is a limit ... not a limit?

Teaching Maths Using Computer Algebra Systems



 Video of Elizabeth solving this.

Elizabeth's Jotter

$$18. r = \frac{x+p}{x-p}$$

$$r(x-p) = x+p$$

$$rx - pr = x+p$$

$$rx = x + p + pr \quad rx - pr - x = p$$

$$r(x-p) = p + pr$$

~~3-13~~

$$x(r+1) = p + pr$$

$$x = \frac{p + pr}{r+1}$$

$$x = \frac{p}{r+1} + \frac{pr}{r+1}$$

$$x = p + \frac{p}{r+1}$$

$$18. r = \frac{x+p}{x-p}$$

$$r(x-p) = x+p$$

$$rx - pr = x+p$$

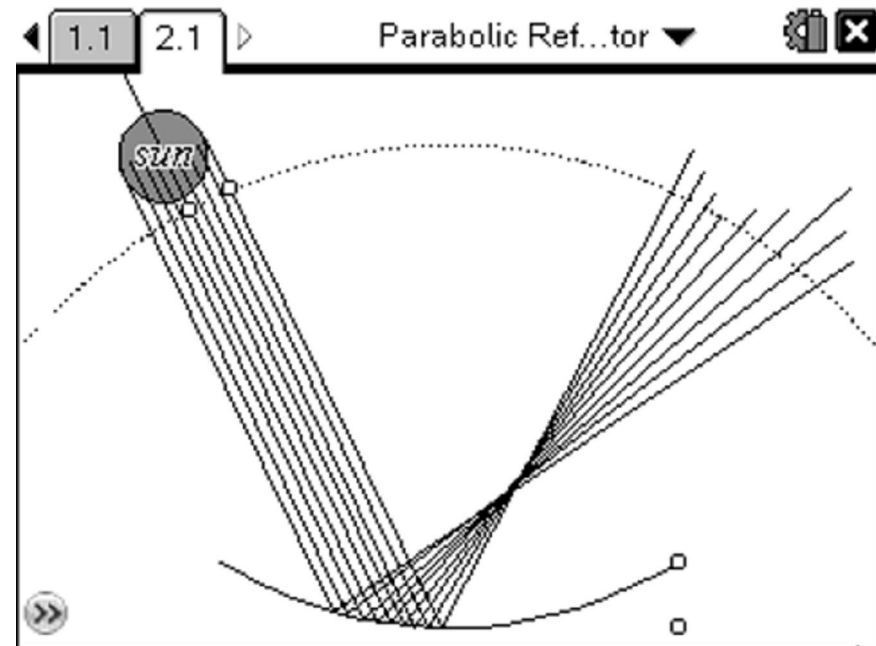
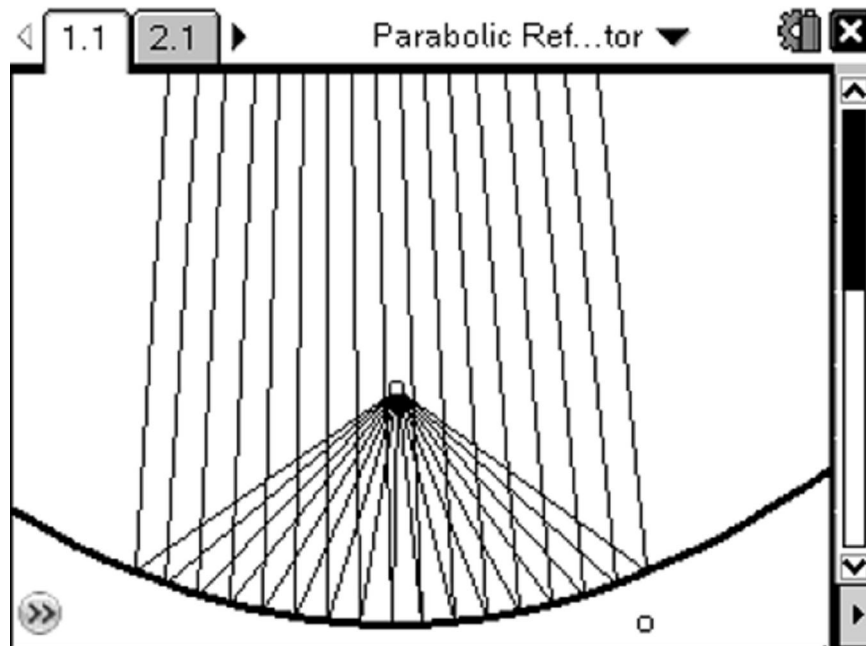
$$rx - pr - x = p$$

$$x(r-1) = p + pr$$

$$x(r-1) = p + pr$$

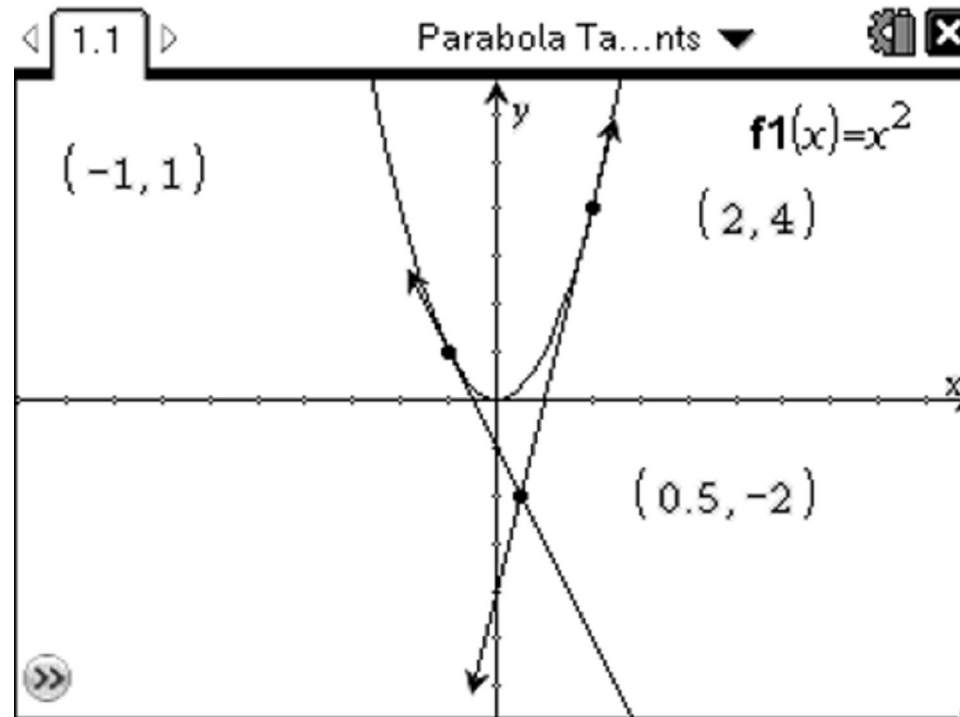
$$x = \frac{p + pr}{r-1} \text{ agree}$$

Parabolic Reflectors



Why we should teach students about the quadratic function!

Tangents to a Parabola



Investigate the connection between the coordinates of tangent points on a parabola and the intersection point of these tangent lines.

Want More of 'Lesson from America'?

www.CalculatorSoftware.co.uk/smc

**Thank You
for choosing to attend this session.**