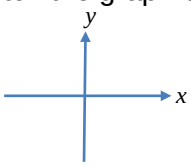
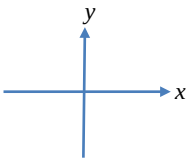
GCSE – Mathematics
Topic: Transformation of graphs and function notation

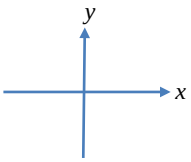
Tier: Higher

Grade: A* / A

Starter: Sketch the graph of graph

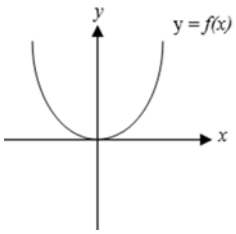
a. y = x 

b. y = x^2 

c. y = x^3 

Top Tips!

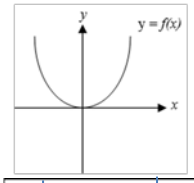
Learn the following rules.

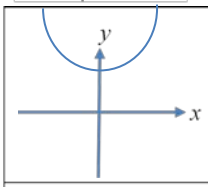
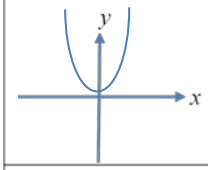
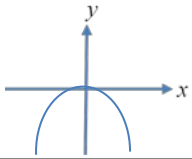
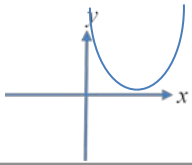
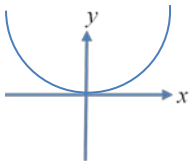


1. y = -f(x) Reflect in x-axis ∩
2. y = 4f(x) Steeper (narrower) ∪
3. y = ½f(x) Less Steep (wider) ∪
4. y = f(x) ± 4 No brackets up or down ↕
5. y = f(x ± 4) Brackets left or right **opposite** ↔

Skills:

Find the matching pairs, for y =f(x) below

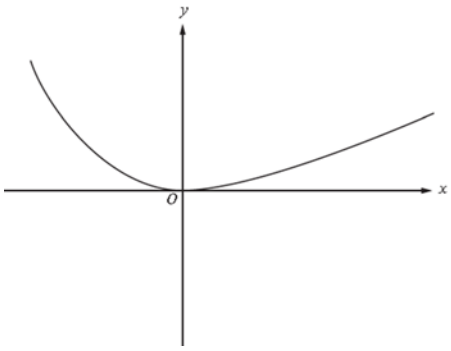


	y = f(x – 3)
	y= f(x) + 4
	y = 2f(x)
	y = -f(x)
	Y = ½f(x)

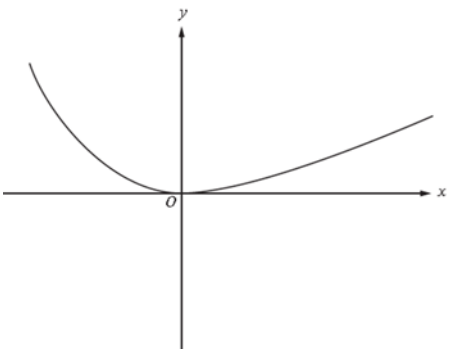
Examination Question:

2012 November Linear P1 Higher Qu 14

a. The diagram shows a sketch of $y = f(x)$.
On the same diagram, sketch the curve $y = f(x – 2)$.
Mark clearly the coordinates of the point where this curve touches an axis. [2]



b. The diagram shows another sketch of $y = f(x)$.
On the same diagram, sketch the curve $y = – f(x) + 3$.
Mark clearly the coordinates of the point where this curve meets the y-axis. [3]



Assessment for Learning

Video / QR code

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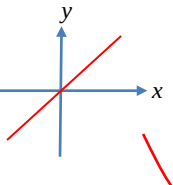
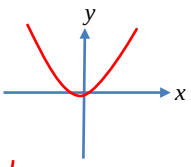
Starter: Sketch the following graphs:

d. y = x



e. $y = x^2$



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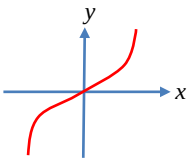

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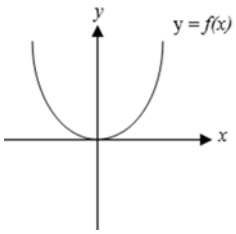

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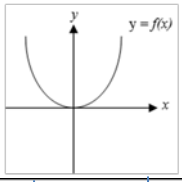

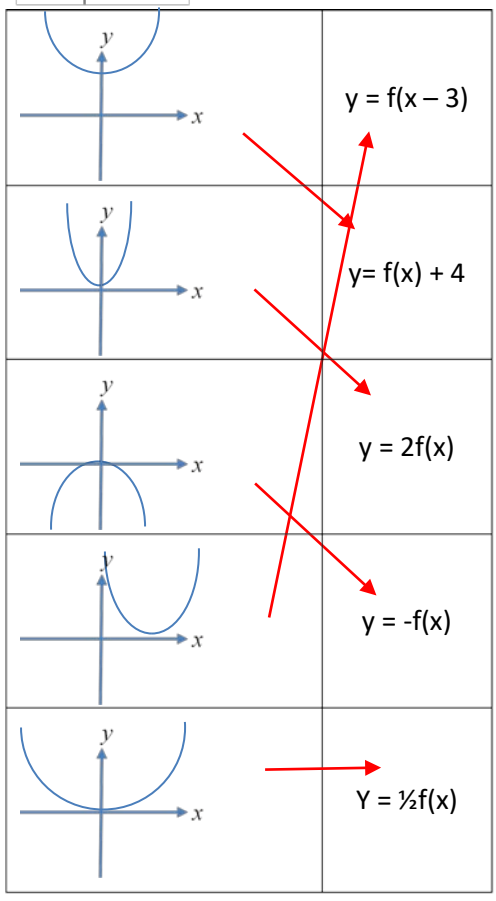

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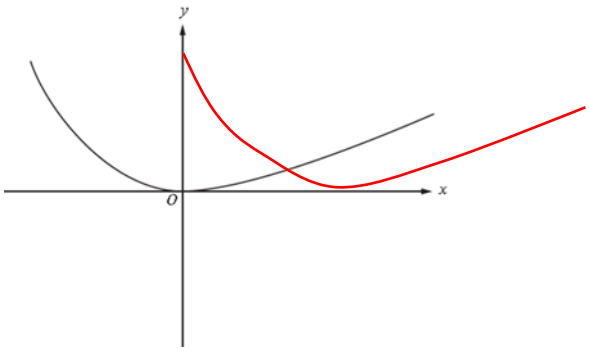

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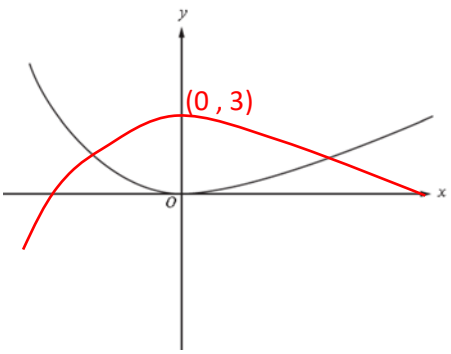

Assessment for Learning

Video / QR code


GwE