

6. Choose from the list of functions and relations below:

A $x^2 + y^2 = 100$	B $y = x(x + 2)^2$	C $y = \sqrt{(3x - 1)} + 1$	D $y = \frac{3}{x+4}$
E $xy = 1$	F $y^2 = 13x$	G $\frac{2}{x-1} = 3 - y$	H $y = x(x - 9)$

and **write down only the letter(s)** of all those:

a) which are NOT functions,

b) which represent circles or cubics,

c) whose graphs have domains that exist for all real values,

d) whose graphs have asymptotes.

[8 Marks]

****End of Test****



**ALL SAINTS'
COLLEGE**

MATHEMATICS DEPARTMENT

**Year 11 Methods - Test Number 1b
Functions and Graphs
Resource Rich**

Name: _____ **Teacher:** _____

Marks: 20

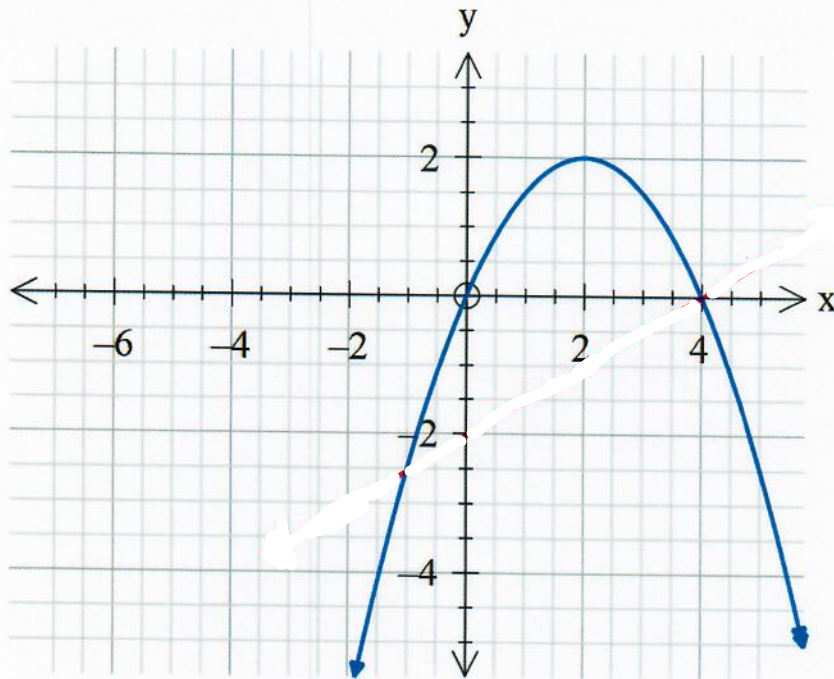
Time Allowed: 15 minutes

Instructions: You **ARE** allowed your calculator(s) but NO NOTES.

You will be supplied with a formula sheet.

1. [2, 2, 2, 2 = 8 marks]

The function $y = f(x)$ is shown below:



(a) State the equation of $f(x)$

(b) State the domain and range of $f(x)$

Another function is given by $g(x) = 0.5x - 2$

(c) Sketch $y = g(x)$ on the axes above.

(d) For what values of x does $f(x) = g(x)$?

