Question 1

2010 HSC Mathematics

Band 2/3

Sample 1 Start here for Question Number: a) $x^2 = 4x$. × = 4. 1 = a+ bv5. J5-2 6) 1 x 75+2 15-2 15+2 F.D. ha J5+2 3 c) (-62) r=5. $(x^{2}+(-1))+(y^{2}+2)=25.$ $(3c^2 - 1) + (y^2 + 2) = 25.$ d) |2x+3| = 9.2x+3=9. 2x+3=-9 $2x = 6. \qquad 2x = -12$ x=3. or. x=-6.

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Samplee) y = x2tanx. y'= xx sec2x + tanx 2x. = xsec2x + 2xtanx. $\frac{1}{3} \frac{1-\frac{1}{3}+\frac{1}{9}-\frac{1}{27}+...}{3}$ So = a r-1 a = 1 r = - 1/3 50=1 -13-1 = -3/4. = -0.75.) $f(x) = \sqrt{x-8}$ 9 domain. x is the hot sale real for x > 8. Additional writing space on back page. Office Use Only - Do NOT write anything, or make any marks below this line.