

MATH 102 REVIEW #5

- (1) ON THE SAME COORDINATE SYSTEM, SKETCH THE GRAPHS OF

a) $y = 2^x$, $y = 2^{-x}$, $y = 2^{x-2}$, $y = -2^x$

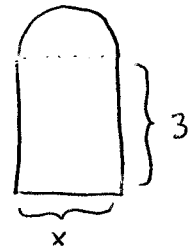
b) $y = e^x$, $y = 1 - e^x$, $y = e^{-x} - 2$

- (2) COMPLETE THE SQUARE TO WRITE

$f(x) = 3x^2 + 6x - 1$ IN FORM $f(x) = a(x-b)^2 + c$

- (3) A ROMAN WINDOW CONSIST OF A RECTANGLE TOPPED WITH A SEMI-CIRCLE.

- a) FIND THE AREA OF SUCH A WINDOW AS A FUNCTION OF WIDTH x , IF THE RECTANGLE PORTION HAS HEIGHT 3m.



- b) FIND THE AREA OF SUCH A WINDOW AS A FUNCTION OF WIDTH x , IF THE HEIGHT OF THE ENTIRE WINDOW IS 3m.

