

QUESTION/VRAAG 6

6.1	$y = a(x - 2)^2 + 9$ Substitution $(0; 5)$: $5 = a(0 - 2)^2 + 9$ $5 = 4a + 9$ $a = -1$ $y = -1(x - 2)^2 + 9$ $= -(x^2 - 4x + 4) + 9$ $= -x^2 + 4x + 5$	✓ substitution coordinates of TP ✓ substitution of/van $(0; 5)$ ✓ value of/waarde van a ✓ simplification/vereenv (4)
6.2	Average Gradient $= \frac{9-5}{2-0}$ or $\frac{5-9}{0-2}$ $= 2$	✓ $\frac{9-5}{2-0}$ or $\frac{5-9}{0-2}$ ✓ answer/antwoord (2)
6.3	x-intercepts of/x-afsnitte van f : $\frac{1}{2}x^2 - 8 = 0$ $x^2 = 16$ $x = 4 \text{ or } -4$ At/By B: $x = -4$ x-intercepts of/x-afsnitte van g : $-x^2 + 4x + 5 = 0$ $x^2 - 4x - 5 = 0$ $(x - 5)(x + 1) = 0$ $x = -1 \text{ or } 5$ At/By D: $x = 5$ Length of/Lengte van BD: $4 + 5 = 9$	✓ $\frac{1}{2}x^2 - 8 = 0$ ✓ -4 ✓ factors/faktore ✓ 5 ✓ answer/antwoord (5)
6.4.1	$x \leq -4$ or $x \geq 4$	✓ $x \leq -4$ ✓ $x \geq 4$ (2)
6.4.2	$0 < x < 2$	✓ endpoints/eindpunte ✓ notation/notasie (2) [15]