education

Department of Education
FREE STATE PROVINCE

NATIONAL SENIOR CERTIFICATE

GRADE 11

MATHEMATICS

2024 INFORMAL TEST 4

1.	Simplify the following, without using a calculator:	
1.1	$\dfrac{6^{2x} \times 4^{-x}}{(3^x)^2}$	(4)
1.2	$\dfrac{\sqrt{27}+\sqrt{12}}{\sqrt{75}}$	(4)
1.3	If $x = \dfrac{3-\sqrt{a}}{\sqrt{2}}$ and $y = \dfrac{4+\sqrt{a}}{\sqrt{2}}$, determine the value of $(x+y)^2$	(3)
2	Solve for x:	
2.1	$x = \dfrac{5}{3x-2}$	(4)
2.2	$x^2 - 2x = 5$ (Answer to **three** decimal places)	(4)
2.3	$x^2 - 2x \leq 15$	(3)
2.4	$\dfrac{x+3}{x-4} \geq 0$	(4)
		[25]