Maths IB_1 **Pre - test 1b** Tuesday 3.9.2024

Revision *(factorisation, identities, expansion, roots ...)* Name:_____

Problem 1 *Simplify the following expression* [/ 8 marks]

1) $\sqrt{50}+\sqrt{18}$

2) $\frac{\sqrt{50}\times\sqrt{18}}{10\sqrt{9}}$

3) $\frac{\sqrt{50}}{\sqrt{18}}$

4) $\frac{(2+\sqrt{2})^2+(2-\sqrt{2})^2}{2}$

Problem 2 *Solve the second degree equations* [/ 6 marks]

using either the determinantor the method of 'completing the square'

1) $x^2+3x-28=0$

2) $2x^2+3x-2=0$

Problem 3 *Solve the following logarithmic equations* [/ 12 marks]

1) $2\log_3(x-1)=\log_3(9)$

2) $\log_2(x-2)+\log_2(x+2)=3$

3) $\log_7((x-2)^2)=1$

4) $\log_7(14x)-\log_7(x-5)=2$

5) $\log_2^2(x)-7\log_2(x)+6=0$

6) $\log_2(x^2-x-6)=2$

tot: / 24 marks