**RWAMAGANA DISTRICT**

**G.S MUYUMBU**

**S2 ALL**

 **ASSESSMENT**

**SUBJECT : MATHEMATICS / 30 MARKS**

1. Given that x=3 , y= 4 and w= 5,

evaluate $\frac{3y-5w}{w+x}$ **( 3marks )**

1. Write the following in its simplest index form
2. 96 **( 2 marks )**
3. Use the quadratic identities to find the area of the rectangle whose dimensions are.

 99 m by 101 m **( 3 marks )**

1. Simplify the following
2. $\frac{6x^{4}z}{zx^{2} X 3x^{2} } $ **( 2 marks )**
3. $6x^{2}y X 3x^{3}y^{5}$ **( 2 marks )**
4. $( 3-\sqrt{2 })( 3+ \sqrt{2 }$) **( 2 marks )**
5. Remove brackets and simplify
6. $2\left(3x-y\right)+4\left(x+2y\right)-3(2x-3y)$ **( 3 marks )**
7. $-\left(x+y\right)+x $ **( 2 marks )**
8. Evaluate the following
9. $125^{^{2}/\_{3} }X 64^{^{1}/\_{2} }$ **( 3 marks )**
10. Given that $f\left(x\right)= 3x^{2 }+13x+14$ and $g\left(x\right)=x+2 $

Divide $f\left(x\right) by g\left(x\right)$ **( 3 marks )**

1. Given that P and Q are polynomials

 $P=2x^{3 }+3x^{2 }+6$

 $Q=2x^{3 }+2x^{2 }+4x-4$

 Find P+Q **( 3 marks )**

1. Factorize the following:
2. 2ab + 4ac **( 2 marks )**
3. $x^{2 }+4x+1 $ **( 2 marks )**
4. $x^{2 }-25$ **( 2marks )**
5. $3y \left(4-y\right)+6(4-y)$ **( 2 marks )**
6. Expend and simplify the following **( 3 marks )**

$$\left(3x-2\right)(2x^{2}-2x+1 )$$

1. Solve the following
2. $3^{2x-5}=27$ **( 3 marks )**
3. $9^{x }X 3^{(2x-1)}= 3^{15}$ **( 3 marks )**
4. Solve the following equation for x **( 3 marks)**

$$2x^{2 }+3x+1=0$$

1. Write the following in standard notation (scientific notation). **( 3 marks )**

0.000342

1. Rationalise the denominator. **( 3 marks )**

 $\frac{2}{2+\sqrt{7}}$

1. Find the value of **a**, **b** and **c** in the identity **( 3marks )**

$$2x^{2}-x+1 ≡a \left(x-1\right)^{2 }+b\left( x-1\right)+c $$

1. If $xy=5 $ and $y=2$ find : **( 3marks )**
2. $x$
3. $2(x+y)$

**GOOD LUCK !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!**