Year 10 Mathematics Worksheet 4

Write the answers in your Exercise Book.

Algebra

1.   Simplify the following

     (a) $\sqrt{5^2}$ **(1 mark)**

     (b) $\sqrt{4x^2}$ **(1 mark)**

     (c) $\sqrt{64p^2q^2}$ **(1 mark)**

2.   Using **Null Factor Law**, solve the following equations.

     (a) $x(x+2)=0$ **(2 marks)**

     (b) $(x-3)(x+1)=0$ **(2 marks)**

     (c) $x^2-100=0$ **(2 marks)**

3.   The formula for the perimeter of a rectangle is given as $P=2(l+w)$.

     (a)   Make w the subject of the equation.   **(2 marks)**

     (b)   Calculate the value of w if $P=30$ and $l=8$.   **(1 mark)**

4.   A formula is given as $v^2=u^2+2as$

     (a)   Make s the subject of the formula.   **(2 marks)**

     (b)   Calculate the value of s if $u=20$, $a=5$ and $v=50$.   **(1½ marks)**

5.   The simple interest, \$I, from a principal of \$P over a period of T years at the rate
    of R% per year is given by the formula $I=\dfrac{PRT}{100}$.

     (a)   Make T the subject of this formula.   **(2 marks)**

     (b)   Calculate the value of T if I = 200, P = 1000 and R = 4.   **(1 mark)**