2021 Worksheet 2
Year 12 Mathematics

Write the answers in your Exercise Book.

1. Calculate the value of $\displaystyle\sum_{n=1}^{3}(3n-2)$ **(2 marks)**

2. Determine the value of m if $\sqrt{2}+\sqrt{8}+\sqrt{18}=\sqrt{m}$ **(2 marks)**

3. Simplify $\dfrac{7-\sqrt{7}}{1-\sqrt{7}}$ **(2 marks)**

4. Solve

    (a) $x(x-4)=0$ **(1 mark)**

    (b) $\dfrac{x+6}{3}-\dfrac{x-1}{2}=2$ **(2 marks)**

    (c) $\dfrac{3^{5x+3}}{4}=25$ **(2 marks)**

5. (a) Factorise x^2-25 **(1 mark)**

    (b) Factorise $3x^2+11x-20$ **(2 marks)**

    (c) Hence, simplify $\dfrac{x^2-25}{3x^2+11x-20}$ **(2 marks)**

6. Make x the **subject** of the formula $y=\dfrac{3x-1}{x+9}$ **(2 marks)**

7. Solve $x^2-11x+30\le 0$ **(3 marks)**