Solving Equations by Factorisation (Product = 0)

MEMORANDUM

Name: ..... Class: .....

Date: .....

MARK ____ / 20

Answer all questions. Show all your working — marks are awarded for method as well as the final answer. **Teacher copy: accept any correct equivalent method.**

1 Solve: $(x-2)(x+6)=0$ (2)

$x=2$ or $x=-6$ ✓✓ (2)

2 Solve: $(x+1)(x-7)=0$ (2)

$x=-1$ or $x=7$ ✓✓ (2)

3 Solve: $x^2+5x+6=0$ (3)

$(x+2)(x+3)=0 \rightarrow$ **$x=-2$ or $x=-3$** ✓✓✓ (3)

4 Solve: $x^2-7x+10=0$ (3)

$(x-2)(x-5)=0 \rightarrow$ **$x=2$ or $x=5$** ✓✓✓ (3)

5 Solve: $x^2-3x=0$ (2)

$x(x-3)=0 \rightarrow$ **$x=0$ or $x=3$** ✓✓ (2)

6 Solve: $x^2-25=0$ (2)

$(x-5)(x+5)=0 \rightarrow$ **$x=5$ or $x=-5$** ✓✓ (2)

7 Why may you not divide $x^2=4x$ by x? (2)

You would lose the root **$x=0$**. ✓✓ (2)

8 Simplify: $(10x^3+5x^2)\div 5x$ (2)

$2x^2+x$ ✓✓ (2)

9 Simplify: $(12x^3-8x^2+4x)\div 4x$ (2)

$3x^2-2x+1$ ✓✓ (2)

TOTAL: 20 marks

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