**Quadratic Equations - Completing the Square**

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| Name : | Class : | Date : |

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| **1)** Consider the equation    $x^{2}+2x-24=0$         a) Rearrange into the form  $(x+b)^{2}=c$   b) Hence, solve the equation    $x^{2}+2x-24=0$ | [1]   |
| **2)** Consider the equation    $s^{2}-8s-33=0$         a) Rearrange into the form  $(s+b)^{2}=c$   b) Hence, solve the equation    $s^{2}-8s-33=0$ | [1]   |
| **3)** Consider the equation    $s^{2}+17s+72=0$         a) Rearrange into the form  $(s+b)^{2}=c$   b) Hence, solve the equation    $s^{2}+17s+72=0$ | [1]   |
| **4)** Consider the equation    $z^{2}-z-56=0$         a) Rearrange into the form  $(z+b)^{2}=c$   b) Hence, solve the equation    $z^{2}-z-56=0$ | [1]   |
| **5)** Consider the equation    $2x^{2}+5x+3=0$         a) Rearrange into the form  $a(x+b)^{2}=c$   b) Hence, solve the equation    $2x^{2}+5x+3=0$ | [1]   |
| **6)** Consider the equation    $2x^{2}-5x+3=0$         a) Rearrange into the form  $a(x+b)^{2}=c$   b) Hence, solve the equation    $2x^{2}-5x+3=0$ | [1]   |

**Solutions for the assessment Quadratic Equations - Completing the Square**

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| **1)** a)  $(x+1)^{2}=25$     b)  $x=4$ or  $x=-6$ | **2)** a)  $(s-4)^{2}=49$     b)  $s=11$ or  $s=-3$ |
| **3)** a)  $(s+8.5)^{2}=0.25$ or  $(s+\frac{17}{2})^{2}=\frac{1}{4}$     b)  $s=-9$ or  $s=-8$ | **4)** a)  $(z-0.5)^{2}=56.25$ or  $(z-\frac{1}{2})^{2}=\frac{225}{4}$     b)  $z=8$ or  $z=-7$ |
| **5)** a)  $2(x+\frac{5}{4})^{2}=\frac{1}{8}$     b)  $x=-\frac{3}{2}$ or  $x=-1$ | **6)** a)  $2(x-\frac{5}{4})^{2}=\frac{1}{8}$     b)  $x=\frac{3}{2}$ or  $x=1$ |