HOW TO SOLVE A QUADRATIC EQUATION (with all steps shown):

YOU MAY USE EITHER PROCESS

I. Quadratic Formula: *u* is a constant.

$\theta^2 + 2u\theta - 1 = 0$

$\theta = \frac{-2u \pm \sqrt{4u^2+4}}{2}$

$\theta = \frac{-2u \pm 2\sqrt{u^2+1}}{2}$

$\theta = -u \pm \sqrt{u^2 + 1}$

II. Completing the Square Process: *u* is a constant.

$\theta^2 + 2u\theta - 1 = 0$

$\theta^2 + 2u\theta = 1$

$\theta^2 + 2u\theta + u^2 = 1 + u^2$

$(\theta + u)^2 = 1 + u^2$

$\theta + u = \pm\sqrt{1 + u^2}$

$\theta = -u \pm \sqrt{1 + u^2}$