

Exercise A.6.85 Solve by the Square Root Method: $(2y+3)^2 = 9$.

Solution

We take square roots of both sides to get $\sqrt{(2y+3)^2} = \sqrt{9}$ or $|2y+3| = 3$

or: $2y+3 = -3$ or $2y+3 = 3$. Now

$2y+3 = -3$ implies $2y = -6$ or $y = -3$,

and $2y+3 = 3$ implies $2y = 0$ or $y = 0$.

So either $y = -3$ or $y = 0$ and the solution set is $\{-3, 0\}$. \square