Solve by Taking Square Roots

* Only use when there is no "bx"

1. Get x^2 by itself
2. Take the square root of both sides
3. There will always be a positive + negative answer

Ex $K^2 - 25 = 0$
$+25 \quad +25$
$\sqrt{K^2} = \sqrt{25}$
$K = \pm 5 : 5, -5$

$(-5)^2 = 25$
$5^2 = 25$

Ex 2 $P^2 + 19 = 10$
$-19 \quad -19$
$\sqrt{P^2} = \sqrt{-9}$

$3^2 + 19$
$9 + 19$
28

$3^2 = 9$

no real solution

Ex 3 $\frac{-3x^2}{-3} = \frac{-27}{-3}$
$\sqrt{x^2} = \sqrt{9}$
$x = \pm 3$ 3 or -3

Ex 2 $\frac{b^2}{2} = 25 \cdot 2$
$\sqrt{b^2} = \sqrt{50}$
$b = \pm\sqrt{50} = \pm 5\sqrt{2}$

$50 = 5 \cdot 10 = 5 \cdot 5 \cdot 2$

Ex 5 $3b^2 - 20 = 88$
$+20 \quad +20$
$\frac{3b^2}{3} = \frac{108}{3}$
$\sqrt{b^2} = \sqrt{36}$
$b = \pm 6$

ex6 $2h^2 - 42 = -22$
$+42 \quad +42$
$\frac{2h^2}{2} = \frac{20}{2}$
$\sqrt{h^2} = \sqrt{10}$
$n = \pm\sqrt{10}$

Ex 7 $\frac{4(x+2)^2}{4} = \frac{100}{4}$
$\sqrt{(x+2)^2} = \sqrt{25}$

$x + 2 = \pm 5$
$-2 \quad -2$
$-2+5 = 3$
$-2-5 = -7$
$x = 3$ or -7

$\frac{5(n+1)^2}{5} = \frac{35}{5}$
$\sqrt{(n+1)^2} = \sqrt{7}$

$n + 1 = \pm\sqrt{7}$
$-1 \quad -1$
$n = -1 \pm \sqrt{7}$
$-1 + \sqrt{7}$
$-1 - \sqrt{7}$