◎ I can solve a $(\quad)^3$
cube

$1^3 = 1$ $\quad 2^3 = 8$ $\quad 3^3 = 27$ $\quad 5^3 = 125$ $\quad 10^3 = 1000$

$\sqrt[3]{1} = 1$ $\quad \sqrt[3]{8} = 2$ $\quad \sqrt[3]{27} = 3$ $\quad \sqrt[3]{125} = 5$ $\quad \sqrt[3]{1000} = 10$

$\sqrt[3]{-1} = -1$ $\quad \sqrt[3]{-8} = -2$ $\quad \sqrt[3]{-27} = -3$ $\quad \sqrt[3]{-125} = -5$ $\quad \sqrt[3]{-1000} = -10$

GOAL ⇒ Isolate the symbol

| abs | $\sqrt{\text{sq roots}}$ | $(\text{sq})^2$ | $(\text{cubed})^3$

ans 2 1 2 1

EX1] $3 + (x-2)^3 = 11$

$-3 \qquad -3$

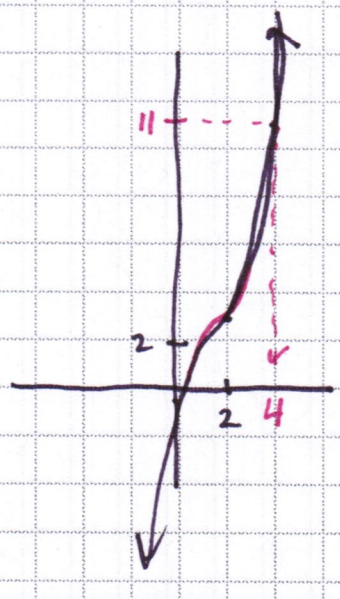
$(x-2)^3 = 8$

$\sqrt[3]{(x-2)^3} = \sqrt[3]{8}$ ✓

$x - 2 = 2$

$+2 \quad +2$

$\boxed{x = 4}$



notes on other page →

	Type of problem	When NO SOLUTION	Is there poss 2 sol.
1	$\frac{1}{\#} + \frac{1}{\#+x} = \#$ $\frac{1}{x} + \frac{1}{x+2} = 10$	$\Rightarrow$ * check ans. and make sure denom $\neq 0$ $x = -2 \Rightarrow$ NO SOL.	1 solu. $x^2 \Rightarrow$ 2 solu.
2	sq roots $(\sqrt{\#})^2 = (\#)^2$ $\sqrt{x-1} = -2$	* check answer $\sqrt{\#} =$ neg # nosolution	1 sol.
3	Abs. values $\lvert\ \rvert = \#$ + −	Isolate $\lvert x \rvert$ check $\lvert\ \rvert = -\#$ no solution	usually 2 solution (1 sol $\lvert x \rvert = 0$)
4	$\sqrt{(\quad)^2} = \sqrt{\#}$ dont forget $\pm\#$	check $(\quad)^2 = \sqrt{-\#}$ no solution	usually 2 solutions (1 sol $(\ )^2 = 0$)
5	$\sqrt[3]{(\quad)^3} = \sqrt[3]{\#}$	ALWAYS A SOL.!	1 solution always