Zero Product Property

For all real numbers *a* and *c*, *ac* = 0 if and only if *a* = 0 or *c* = 0

$$\forall\, a, c \in \mathrm{R},\ ac = 0 \text{ iff } a = 0 \text{ or } b = 0$$

Ex. By the ZPP, $(y-2)(y+5) = 0 \rightarrow y+2 = 0$ or $y-5 = 0$

$y = -2$ or $y = 5$

$\therefore$ the solution is $\{-2\} \cup \{5\} = \{-2, 5\}$

Ex. 1 $(x-2)(x+5)(x-4) = 0$

Ex. 2 $x(x-3)(x+2) = 0$

Ex. 3 $(x+1)(2x-1)(3x+2)(x-5) = 0$