

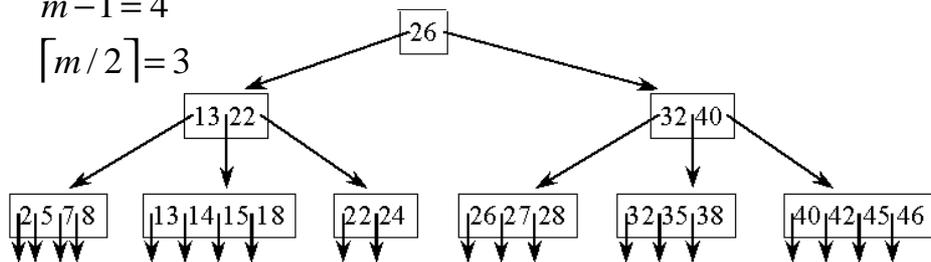
## B+-tree iniziale

$$m = 5$$

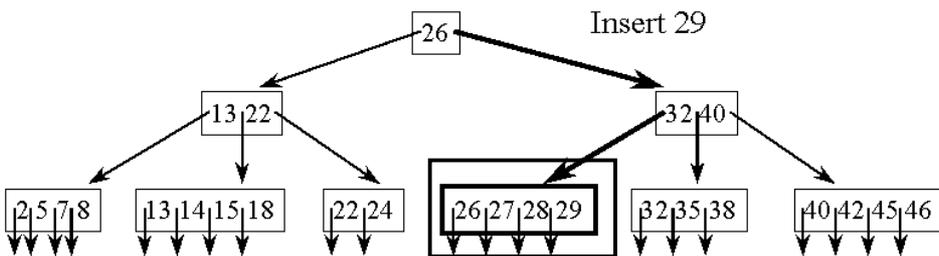
$$\lceil m/2 \rceil - 1 = 2$$

$$m - 1 = 4$$

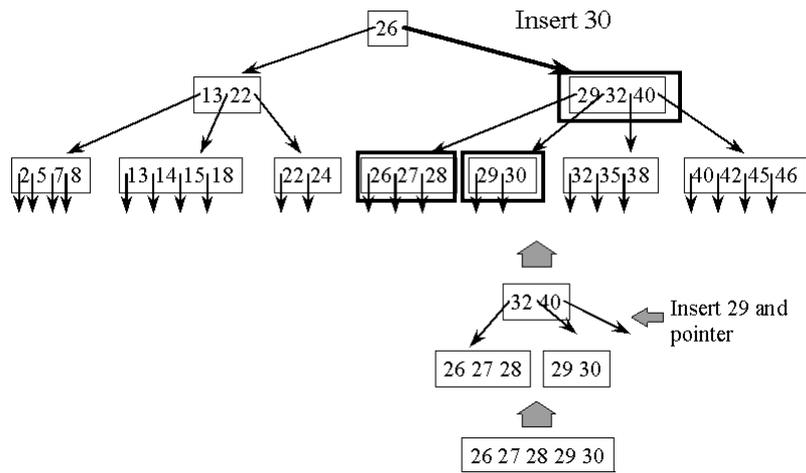
$$\lceil m/2 \rceil = 3$$



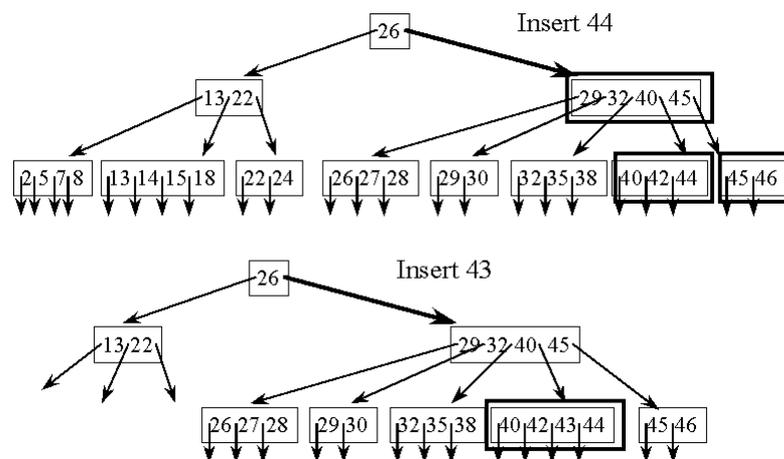
## B+-tree: inserimento senza splitting



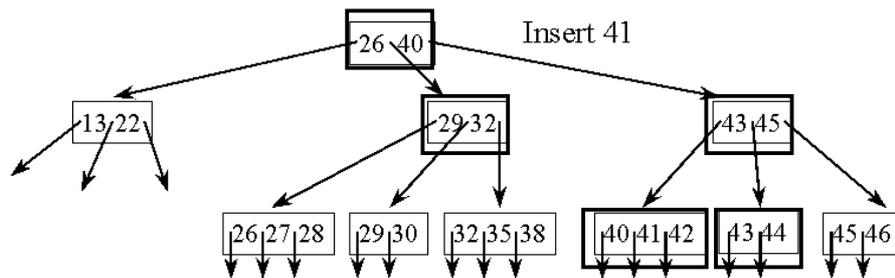
## B+-tree: inserimento con splitting



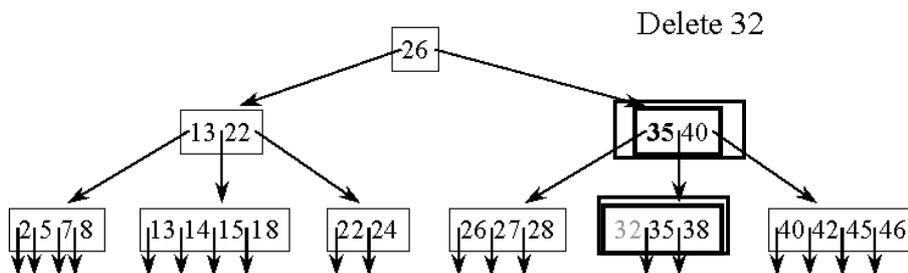
## B+-tree: inserimento con splitting ricorsivo



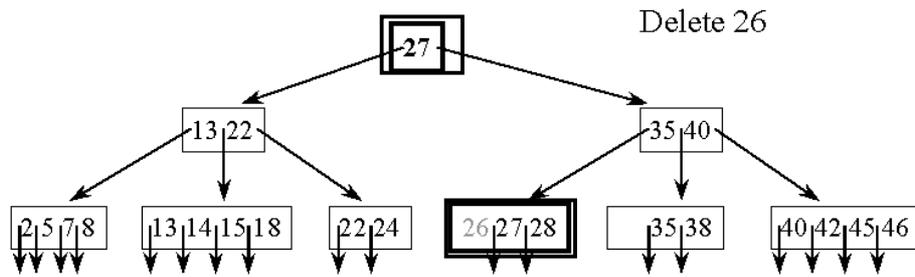
## B+-tree: inserimento con splitting ricorsivo (continua)



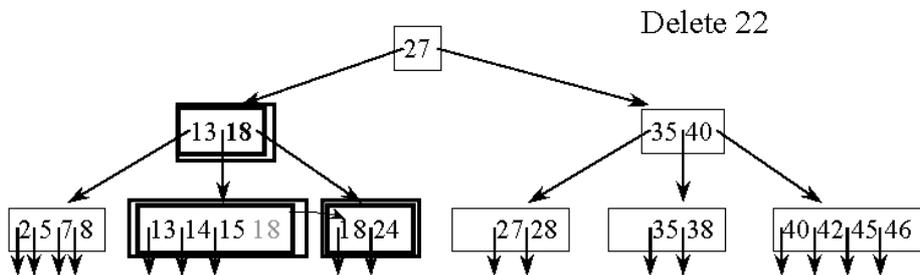
## B+-tree: cancellazione primo elemento di una foglia e aggiornamento padre



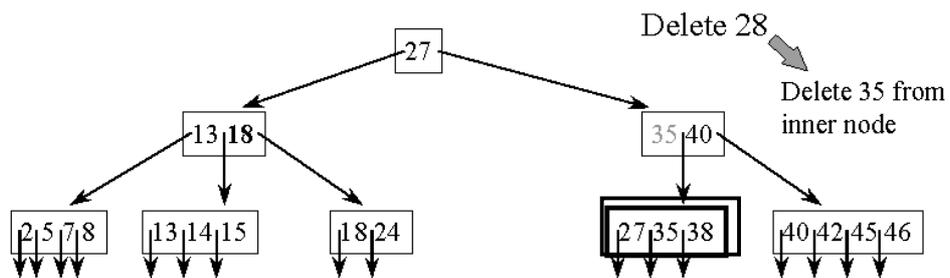
## B+-tree: cancellazione primo elemento di una foglia e aggiornamento antenato



## B+-tree: cancellazione e bilanciamento su foglia



### B+-tree: cancellazione, concatenamento su foglia e padre - primo passo



### B+-tree: cancellazione, concatenamento su foglia e padre - secondo passo

