

High performance 4.

Ex. 1

x.1  
(a) Fill table 1 for efficiency

$$E = \frac{1}{1 + \frac{2p \cdot \log_2(p)}{n}}$$

b) Make plot

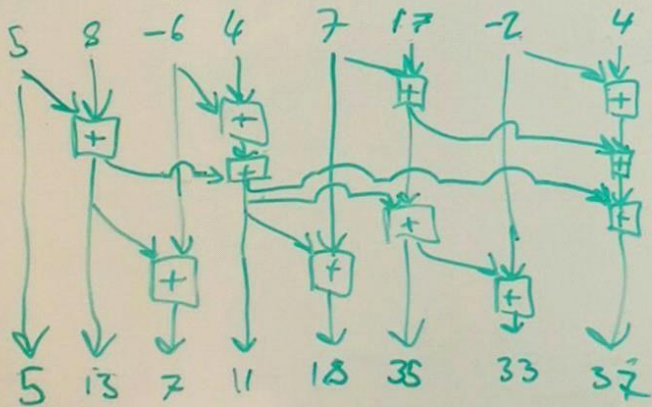
Mat Lab <sup>TM</sup>

↳ Efficiency

Plot for speedup

→ Slide 9

4) draw Balanced bin-tree



Se Slide 28 eller 22

	$P=1$	$P=4$	$P=8$	$P=16$	$P=32$
n					
16	$\frac{16}{18}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{21}$
32	$\frac{32}{54}$	$\frac{2}{3}$	$\frac{2}{5}$	$\frac{1}{3}$	$\frac{1}{11}$
64	$\frac{64}{66}$	$\frac{4}{8}$	$\frac{4}{5}$	$\frac{1}{3}$	$\frac{1}{6}$
128	$\frac{128}{130}$	$\frac{8}{9}$	$\frac{8}{11}$	$\frac{1}{2}$	$\frac{1}{2}$
256	$\frac{256}{258}$	$\frac{16}{17}$	$\frac{16}{19}$	$\frac{2}{3}$	$\frac{4}{9}$
512	$\frac{512}{514}$	$\frac{32}{33}$	$\frac{32}{35}$	$\frac{4}{5}$	$\frac{8}{13}$

We get the point !!