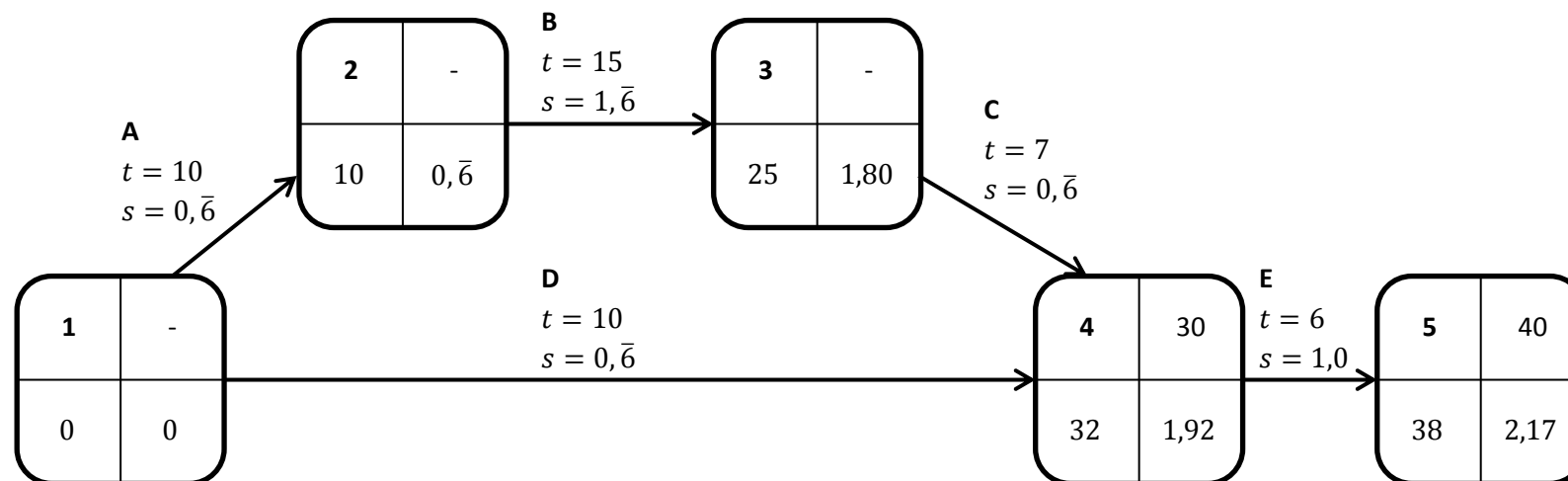


Exercise 7, Project Management

Activity	Optimistic time ( <i>a</i> )	Most likely time ( <i>m</i> )	Pessimistic time ( <i>b</i> )	Target date ( <i>T</i> )	Expected time ( $t_e = \frac{a+4m+b}{6}$ )	Standard deviation ( $s = \frac{b-a}{6}$ )
A	8	10	12	-	10	0,67
B	10	15	20	-	15	1,67
C	5	7	9	30	7	0,67
D	8	10	12	-	10	0,67
E	3	6	9	40	6	1,00

Critical activities are A → B → C → E, because this path may not be postponed in order to achieve C's deadline in week 30. In fact the activities have to run in less than *most likely time* in order to fulfill the deadline. Furthermore activity D has a float of around 22 days based on the *expected time* and is therefore totally uncritical.



Project event	z-value ( $z = \frac{T-t_e}{s}$ )	Probability
1	-	-
2	-	-
3	-	-
4	-1,04	85%
5	0,92	17%

The critical path until activity C may be run on time with a chance of only 15%, meaning that 17 out of 20 project runs will fail C's deadline.

The overall project may, on the other hand, be run on time with a probability of 83%. This means that *more than* 4 out of 5 project (4,15 projects) runs will complete successfully.

