INFO 103 OBLIG 1 | Hallvard Moan Kristiansen - hkr017

1.83

0	1	2	3	4	5
0.03	**0.18**	**0.24**	**0.28**	**0.10**	**0.17**

a. P(3 + 4 + 5) = (0.28 + 0.10 + 0.17) = 0.55
b. P(0 + 1 + 2 + 3 + 4) = (0.03 + 0.18 + 0.24 + 0.28 + 0.10) = 0.83
c. P(4 + 5) = (0.10 + 0.17) = 0.27

1.84

P	Ramada Inn	Sherton	Lakeview Motor Lodge
A	20%	50%	30%
B	5%	4%	8%

Ramada Inn: 0.2 * 0.05 = 0.01 = 1%

Sherton: 0.5 * 0.04 = 0.02 = 2%

Lakeview Motor Lodge: 0.3 https://www.youtube.com/watch?v=MKeTuZ-zoeA 0.08 = 0.024 = 2.4%

a. **1.8 %**
b. **2.4 %**

1.85

1	2	3
80%	80%	80%
4/5	4/5	4/5
0.8	0.8	0.8

X = **3** total operations.
Y = **0.8** probability of survival.
Z = Chance of not surviving 1-0.8 = **0.2**

a. **Svar: Sannsynligheten for at de neste 2/3 pasientene overlever operasjonen er 64%** (0.8 * 0.8)
b. 0.8 * 0.8 * 0.8 = 51%

1.88

A	B	C

0.40	0.35	0.25
0.05	0.03	0.15

A = 0.40 * 0.05 = 0.02 = 2%

B = 0.35 * 0.03 = 0.0105 = 1.05%

C = 0.25 * 0.15 = 0-0375 = 3.75%

Cost overrun = 0.02 + 0.0105 + 0.0375 = 0.068

a. If cost overrun happens the chances for **C** is estimated to be 55%.

0.375/0.068 = 0.55147 = 55%.

b. If cost overrun happens, the chances for **A** is esimated to be 29%.

0.02/0.68 = 0.2941.

1.93

	Engineer 1	**Engineer 2**
Workload	70% | 0.7	30% | 0.7
Probability of error	0.02	0.04

1: 0.7 * 0.02 = 0.014 = 1.4% failure rate

2: 0.3 * 0.04 = 0.012 = 1.2 % failure rate

Answer: I would assumme its engineer 1 who is responcible for the failures, because he is handling a heavier workload at 70% so if you add that up his failure rate gets higher as a result of the heavy workload.

1.94

80% success rate.

20% defective rate.

0.2 * 0.2 * 0.2 = 0.008 = **0.8%**

a. The probability that all three items in production is defective is 0.8%.

b. 0.2 * 0.2 * 0.2 * 0.8 = 6.4%

1.96

?

1.97

A: (100 / 13 + 10)) * 13 = 56.52%.

B: (100 / (40 + 13 + 4 + 2)) * 2 = 3.39%.