#	Rows	Cost	Pag reads	Time(ms)	Index used	Index Op.
1	72591	.484	531	1171	PK	Clust. Index Scan
2	1	.003	10	2	PK	Clust Index Scan
3	12	.003	10	3	PK	Clust. Index Scan
3.b	72591	.488	538	615	PK	Clust. Index Scan
4	60	.522	538	15	PK	Clust. Index Scan
5	11	.037	30	5	ProductID	NonClustered
6a	11	.003	12	5	PrdID inclu StartD	NonClustered
6b	11	.003	16	88	PrdID inclu StartD	NonClustered
6c	1	.005	18	12	PrdID inclu StartD	NonClustered
7	1	.016	19	7	PrdID and StartD	NonClustered
8	1	.003	14	10	Composite (Prdi, StartD)	NonClustered

9.2

```
9ª) Inserted      50000 total records
Milliseconds used: 225596
```

b) avg_frag = 6.71%, avg_page = 28.12

9c) 65 –

```
Inserted      50000 total records
Milliseconds used: 183543
```

80-

```
Inserted      50000 total records
Milliseconds used: 199600
```

90-

```
Inserted      50000 total records
Milliseconds used: 186280
```

9d)

Normal index PK

```
Inserted      50000 total records
Milliseconds used: 163276
```

65 fill factor-

```
Inserted      50000 total records
Milliseconds used: 203056
```

80 fill factor-

```
Inserted      50000 total records
Milliseconds used: 203703
```

90 fill factor-

```
Inserted      50000 total records
Milliseconds used: 196730
```

9e)

Com idx;

```
Inserted      50000 total records
Milliseconds used: 420796
```

Sem idx:

```
Inserted      50000 total records
Milliseconds used: 142836
```

Pode se concluir que a criação de indexes nem sempre corresponde a um funcionamento mais rápido das querys, e que por vezes faz exatamente o contrario. Logo o uso de idx deve ser muito bem estudado antes de implementado numa bd.

9.3)

i - Employee -> Ssn (Clustered)

ii – Employee -> Fname + Lname (Nonclustered)

iii – Employee -> Dno (Nonclustered)

Department -> Dnumber(Clustered)

iv – Works_on -> Pno (Clustered)

Project -> Pnumber (Clustered)

v – Dependent -> Essn (Clustered)

vi – Project -> Dnum (Nonclustered)

Juntando tudo temos:

Employee:

Ssn (Clustered)

Fname + Lname (Nonclustered)

Dno (Nonclustered)

Department:

Dnumber (Clustered)

Works_on:

Pno (Clustered)

Dependent:

Essn (Clustered)

Project:

Pnumber (Clustered)

Dnum (Nonclustered)