

Date : 10th August 2023

Special Question - Quantitative Aptitude

English

**Directions (1 - 5):** There are two companies Samsung and HCL. Each of them has three divisions: sales, accounts, and human resources. Following is information on the companies' employees:

**Samsung :** There are 84 existing employees. If two additional members are recruited to each group, then the ratio of the employees in HR and Account group to that of the sales group becomes 5 : 4.

**HCL :** The number of existing employees In HR group is 8 and no new employees are added to this particular group. The number of existing employees in the sales group is 14.

Note :

1. The total number of employees (existing + new) in the sales group at HCL is equal to one-half of the total number of employees (existing + new) in the account group at Samsung.
2. New employees added to the sales group in HCL are half of the number of new employees added to the account group of the same company.
3. The total number of (existing + new) employees of the Account group in Samsung is 10 more than that of HCL.
4. The total number of (existing + new) employees of HR in Samsung and Sales in HCL is equal to 35.

**Q:1** Find the total number of existing members in HCL.

1. 43
2. 40
3. 50
4. 90
5. 56

**Q:2** Find the ratio of total (existing + new) employees of Samsung and HCL.

1. 17 : 38
2. 16 : 49
3. 90 : 43
4. 56 : 87
5. 2 : 1



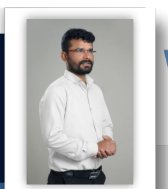
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**Q:3** Find the difference between the existing employees of Samsung and the (existing + new) employees of HCL.

1. 43
2. 46
3. 45



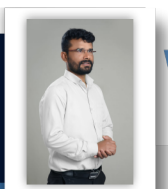
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4. 41

5. 49

**Q:4** (Existing + new) employees of sales in samsung is what more percentage of the (Existing + new) employees of (existing + new) employees in Accounts section of HCL?

1. 75%

2. 100%

3. 200%

4. 150%

5. 60%

**Q:5** Find the total number of existing employees of HR and sales departments of HCL.

1. 34

2. 18

3. 25

4. 22

5. 35



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## Answer Key

1. (2)	2. (3)	3. (4)	4. (2)	5. (4)
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## Answers and Solutions

**Q:1** The correct answer is **option 2** i.e. **40**.

Samsung :

The total number of existing employees in Samsung = 84

Two employees are added in each group of Samsung. So the total number of (existing + new) employees =  $84 + 6 = 90$

Ratio of the HR and Accounts (existing + new) employees and (existing + new) sales employees = 5 : 4

So, the total number of (existing + new) employees of HR and Accounts in Samsung =  $90/9 \times 5 = 50$

The total number of employees of sales in Samsung (existing + new) =  $90 - 50 = 40$

Let's assume the total number of employees (existing + new) in HR = x

So, the total number of employees (existing + new) in account =  $50 - x$

HCL :

The number of existing employees In HR group = 8

The number of existing + new employees In HR group = 8

The number of existing employees in the sales group = 14

The total number of employees (existing + new) in the sales group at HCL =  $(50 - x)/2 = 25 - x/2$

New employees added to the sales group in HCL =  $25 - x/2 - 14 = 11 - x/2$

Existing + new employees of accounts in HCL =  $50 - x - 10 = 40 - x$

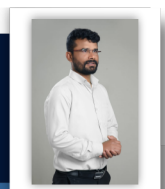
The total number of (existing + new) employees of HR in Samsung and Sales in HCL is equal to 35.

$$x + 25 - x/2 = 35$$

$$x/2 = 10$$

$$x = 20$$

Company	Employees	HR	Account	Sales	Total
Samsung	Existing	18	28	38	84



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Samsung	Existing new	+	20	30	40	90
HCI	Existing		8	18	14	40
HCL	Existing new	+	8	20	15	43

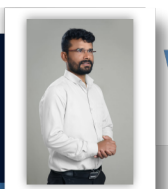
The total number of existing employees in HCL =  $8 + 18 + 14 = 40$



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**Q:2** The correct answer is **option 3** i.e. **90 : 43**.

Samsung :

The total number of existing employees in Samsung = 84

Two employees are added in each group of Samsung. So the total number of (existing + new) employees =  $84 + 6 = 90$

Ratio of the HR and Accounts (existing + new) employees and (existing + new) sales employees = 5 : 4

So, the total number of (existing + new) employees of HR and Accounts in Samsung =  $90/9 \times 5 = 50$

The total number of employees of sales in Samsung (existing + new) =  $90 - 50 = 40$

Let's assume the total number of employees (existing + new) in HR = x

So, the total number of employees (existing + new) in account =  $50 - x$

HCL :

The number of existing employees In HR group = 8

The number of existing + new employees In HR group = 8

The number of existing employees in the sales group = 14

The total number of employees (existing + new) in the sales group at HCL =  $(50 - x)/2 = 25 - x/2$

New employees added to the sales group in HCL =  $25 - x/2 - 14 = 11 - x/2$

Existing + new employees of accounts in HCL =  $50 - x - 10 = 40 - x$

The total number of (existing + new) employees of HR in Samsung and Sales in HCL is equal to 35.

$$x + 25 - x/2 = 35$$

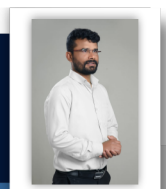
$$x/2 = 10$$

$$x = 20$$

Company	Employees	HR	Account	Sales	Total
Samsung	Existing	18	28	38	84
Samsung	Existing + new	20	30	40	90
HCI	Existing	8	18	14	40
HCL	Existing + new	8	20	15	43

The ratio of total (existing + new) employees of Samsung and HCL = 90 : 43

**Q:3** The correct answer is **option 4** i.e. **41**.



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English

Samsung :

The total number of existing employees in Samsung = 84



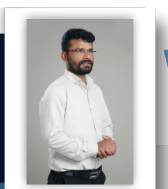
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English

Two employees are added in each group of Samsung. So the total number of (existing + new) employees =  $84 + 6 = 90$

Ratio of the HR and Accounts (existing + new) employees and (existing + new) sales employees =  $5 : 4$

So, the total number of (existing + new) employees of HR and Accounts in Samsung =  $90/9 \times 5 = 50$

The total number of employees of sales in Samsung (existing + new) =  $90 - 50 = 40$

Let's assume the total number of employees (existing + new) in HR =  $x$

So, the total number of employees (existing + new) in account =  $50 - x$

HCL :

The number of existing employees In HR group = 8

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Existing + new employees of accounts in HCL =  $50 - x - 10 = 40 - x$

The total number of (existing + new) employees of HR in Samsung and Sales in HCL is equal to 35.

$$x + 25 - x/2 = 35$$

$$x/2 = 10$$

$$x = 20$$

Company	Employees	HR	Account	Sales	Total
Samsung	Existing	18	28	38	84
Samsung	Existing + new	20	30	40	90
HCL	Existing	8	18	14	40
HCL	Existing + new	8	20	15	43

Required difference =  $84 - 43 = 41$

**Q:4** The correct answer is **option 2** i.e. **100%**.

Samsung :

The total number of existing employees in Samsung = 84

Two employees are added in each group of Samsung. So the total number of (existing + new) employees =  $84 + 6 = 90$





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Ratio of the HR and Accounts (existing + new) employees and (existing + new) sales employees = 5 : 4



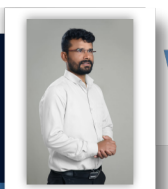
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So, the total number of (existing + new) employees of HR and Accounts in Samsung =  $90/9 \times 5 = 50$

The total number of employees of sales in Samsung (existing + new) =  $90 - 50 = 40$

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New employees added to the sales group in HCL =  $25 - x/2 - 14 = 11 - x/2$

Existing + new employees of accounts in HCL =  $50 - x - 10 = 40 - x$

The total number of (existing + new) employees of HR in Samsung and Sales in HCL is equal to 35.

$$x + 25 - x/2 = 35$$

$$x/2 = 10$$

$$x = 20$$

Company	Employees	HR	Account	Sales	Total
Samsung	Existing	18	28	38	84
Samsung	Existing + new	20	30	40	90
HCL	Existing	8	18	14	40
HCL	Existing + new	8	20	15	43

$$\text{Required percentage} = (40 - 20)/20 \times 100 = 100\%$$

**Q:5** The correct answer is **option 4** i.e. **22**.

Samsung :

The total number of existing employees in Samsung = 84

Two employees are added in each group of Samsung. So the total number of (existing + new) employees =  $84 + 6 = 90$

Ratio of the HR and Accounts (existing + new) employees and (existing + new) sales employees =  $5 : 4$

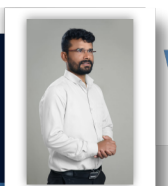
So, the total number of (existing + new) employees of HR and Accounts in Samsung =  $90/9 \times 5 = 50$



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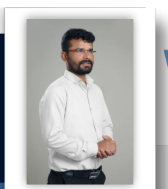
The total number of employees of sales in Samsung (existing + new) =  $90 - 50 = 40$



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So, the total number of employees (existing + new) in account = 50 - x

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HCL	Existing	8	18	14	40
HCL	Existing + new	8	20	15	43

The total number of existing employees of HR and sales departments of HCL =  $8 + 14 = 22$



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