



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



Date : 10th August 2023

Special Question - Quantitative Aptitude

English

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

1. 43
2. 46
3. 45





Date : 10th August 2023

Special Question - Quantitative Aptitude

English

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) |
|--------|--------|--------|--------|--------|

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    |



Date : 10th August 2023

Special Question - Quantitative Aptitude

English

|         |                 |   |    |    |    |    |
|---------|-----------------|---|----|----|----|----|
| Samsung | Existing<br>new | + | 20 | 30 | 40 | 90 |
| HCL     | Existing        |   | 8  | 18 | 14 | 40 |
| HCL     | Existing<br>new | + | 8  | 20 | 15 | 43 |

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





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Special Question - Quantitative Aptitude

English

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

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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    |
| HCL     | 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**.



Date : 10th August 2023

Special Question - Quantitative Aptitude

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Samsung :

The total number of existing employees in Samsung = 84





Date : 10th August 2023

Special Question - Quantitative Aptitude

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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 =  $x$

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HCL :

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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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Date : 10th August 2023

Special Question - Quantitative Aptitude

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





Date : 10th August 2023

Special Question - Quantitative Aptitude

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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) =  $90 - 50 = 40$

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 :

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$$x/2 = 10$$

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| 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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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

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| 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    |

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