

1. The following table shows the production (in lakh units) of four companies over five years.

Year	Company A	Company B	Company C	Company D
2019	120	100	150	130
2020	140	120	160	150
2021	135	110	170	155
2022	150	130	165	160
2023	160	140	180	170

A) What is the average production of Company C over the five years?

- a) 165
- b) 165.5
- c) 165.2
- d) 168

Answer: b) 165.5

B) In which year was the combined production of all companies the highest?

- a) 2019
- b) 2020
- c) 2022
- d) 2023

Answer: d) 2023

C) What is the percentage increase in production of Company A from 2019 to 2023?

- a) 30%
- b) 33.3%
- c) 25%
- d) 35%

Answer: b) 33.3%

D) Which company showed the least variation in production (max – min) during the given years?

- a) A
- b) B

- c) C
- d) D

Answer: b) B

E) What is the ratio of total production of Company A and Company D together in 2021 to that in 2023?

- a) 290 : 330
- b) 290 : 330 (which simplifies to 29:33)
- c) 285 : 330
- d) 295 : 330

Answer: b) 29:33

2. The following table shows the sales (in lakh units) of five companies (A, B, C, D, E) over four years.

Company	2020	2021	2022	2023
A	45	55	65	75
B	60	72	84	96
C	50	58	62	70
D	30	40	55	65
E	80	85	90	95

A) What is the percentage increase in sales of Company D from 2020 to 2023?

- a) 100%
- b) 116.7%
- c) 83.3%
- d) 93.3%

Answer: b) 116.7%

B) In 2022, what was the ratio of sales of Company B to the combined sales of A and C?

- a) 84 : 127
- b) 84 : 65

- c) 84 : 127
d) 84 : 127

Answer: a) 84 : 127

C) Which company had the highest average sales over the four years?

- a) A
b) B
c) C
d) E

Answer: d) E

D) What is the difference between total sales of Company A and Company C over the four years?

- a) 8
b) 10
c) 12
d) 15

Answer: b) 10

E) In 2023, which company's sales were closest to 20% of the total sales of all five companies?

- a) A
b) B
c) C
d) D

Answer: a) A

3. The following table shows data about four companies (A, B, C, D) over five years (2019–2023).

	Company A	Company A	Company B	Compan y B	Company C	Compa ny C	Company D	Compan y D
Year	(Revenue)	(Profit%)	(Revenue)	(Profit%)	(Revenue)	(Profit %)	(Revenue)	(Profit%)

2019	400	20%	350	15%	500	10%	450	12%
2020	480	22%	420	18%	550	12%	500	15%
2021	600	25%	500	20%	600	14%	550	16%
2022	720	24%	550	22%	650	16%	600	18%
2023	800	28%	600	25%	700	18%	750	20%

A) In which year was the total profit earned by all four companies combined the maximum?

- A) 2019
- B) 2021
- C) 2022
- D) 2023

Answer: D) 2023

B) Between 2019 and 2023, which company had the highest CAGR (Compound Annual Growth Rate) of profit?

- A) Company A
- B) Company B
- C) Company C
- D) Company D

Answer: B) Company B

C) If in 2023, each company paid 40% of its profit as tax, then which company had the highest net profit (after tax)?

- A) A
- B) B
- C) C
- D) D

Answer: A) Company A

D) Which company showed the least year-to-year volatility in profit (2019–2023), measured by the coefficient of variation ($CV = \sigma/\mu$) of profits?

- A) A
- B) B
- C) C
- D) D

Answer: C) Company C

E) Suppose in 2023, each company reinvested 50% of its profit into operations. If the reinvestment yields an additional revenue equal to 20% of the reinvested profit, then which company gets the highest additional revenue in 2024 from reinvestment?

- A) A
- B) B
- C) C
- D) D

Answer: A) Company A