CAT 2025

MBA FASTRACK BATCH

percentages + Ratio + Avg

25+

21-24 avg good

20 l

Lecture - 01 | Data Interpretation

Calculations & Tables/Bar/Line

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TOPICS *to be covered*

Data

Quer

1. Calculation Techniques
2. DI Sets based on Tables, Bar, Line Graphs

Calculation Techniques

14.28% of 154

$\frac{1}{7} \times 154 = 22$

18.5% of 2358

627×248

$$\frac{254}{5255}$$

Calculation Techniques

Yes / No

1. Table
2. Bar
3. line

} Read.

SET - 1

Read the following data and answer the given questions.

The table given below shows the number of seats 5 buses (P, Q, R, S and T) and the percentage of seats that were filled out of the total seats in the buses.

Bus	Number of seats	Percentage of seats filled	
P	135	$66\frac{2}{3}\%$	90
Q	240	75%	180
R	96	$62\frac{1}{2}\%$	60
S	x - 160	70%	112
T	$345-x$ - 185	80%	148

Vacant:
45
60
36

$30\% \text{ of } x = 0.3x$ → 48

$20\% \text{ of } (345-x) = 69 - 0.2x$ → 37

Some of the data is intentionally missing.

Note:

A) The total number of vacant seats in all the 5 buses together were 226

B) The number of seats in buses S and T together were 345

C) Only one person can sit on one seat.

$141 + 0.3x + 69 - 0.2x = 226$

$0.1x = 16$

$x = 160$

#Q1. What is the average of the vacant seats of buses Q, R and S together? $(60 + 36 + 48) / 3$

A. 64 B. 54 C. 48 D. 42 E. None of these

#Q2. If the number of vacant seats was distributed in a degree pie-chart, what would have been the approximate central angle for bus P?

A. 72° B. 112.4° C. 62.5° D. 94.9° E. None of these

$96 + 160 = 256$

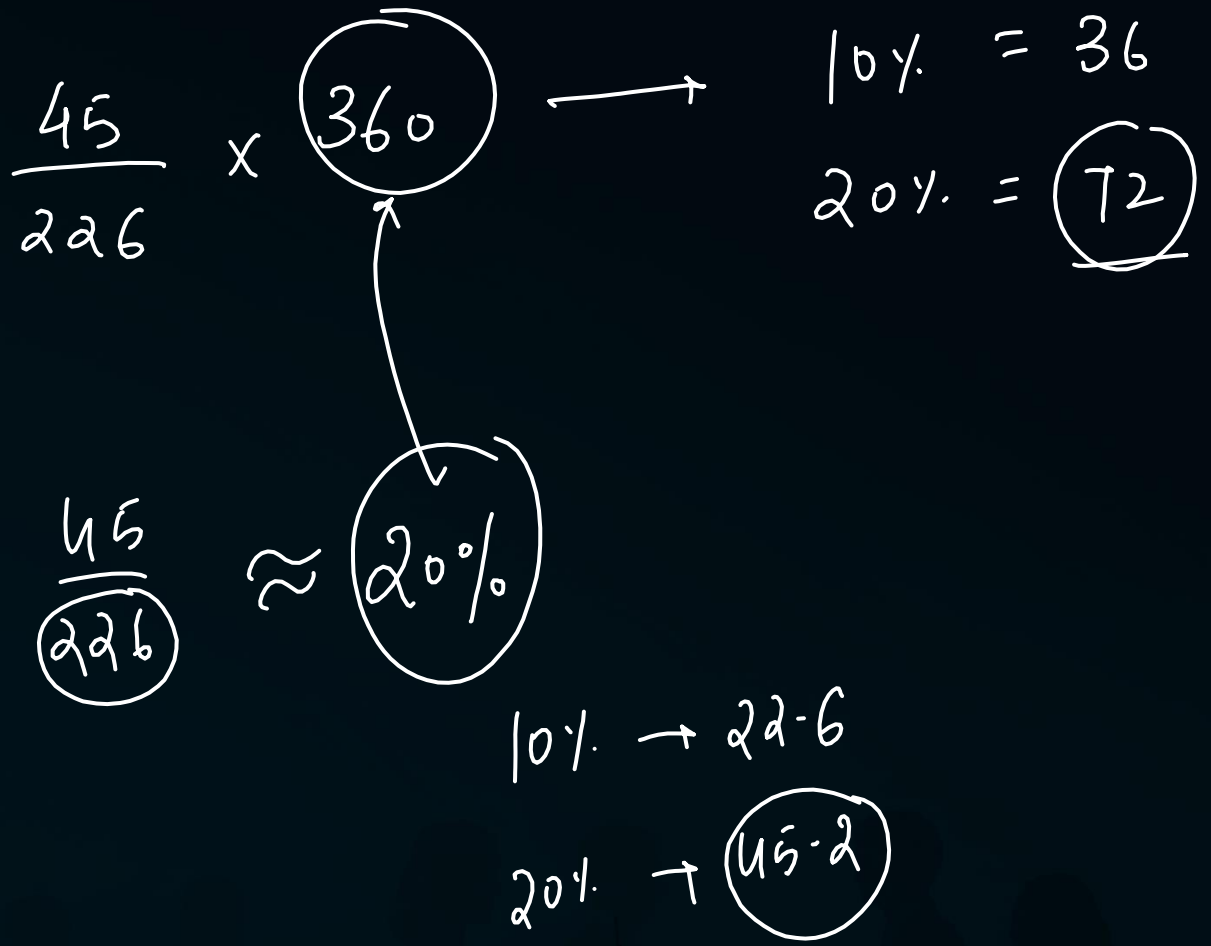
#Q3. What is the ratio of the number of seats in bus R and S together and the number of seats filled in bus Q respectively?

180

A. 5 : 6 B. 10 : 11 C. 64 : 45 D. 7 : 9 E. 11 : 15

#Q4. If 25% of the seats in bus T were occupied by females and the remaining seats were occupied by males. The number of seats occupied by females in bus T is equal to the number of seats occupied by males aging below 60 in bus T. Total number of males and females aging above 60 is 40 more than total number of males and females aging below 60, what is the number of females aging below 60?

A. 15 B. 17 C. 12 D. 19 E. Cannot be determined


45/226 x 360
10% = 36
20% = 72
45/226 ≈ 20%
10% → 22·6
20% → 45·2

Read the following data and answer the given questions.

The table given below shows the number of seats 5 buses (P, Q, R, S and T) and the percentage of seats that were filled out of the total seats in the buses.

Bus	Number of seats	Percentage of seats filled
P	135	$66\frac{2}{3}\%$
Q	240	75%
R	96	$62\frac{1}{2}\%$
S	-	70%
T	-	80%

Some of the data is intentionally missing.

Note:

A) The total number of vacant seats in all the 5 buses together were 226

B) The number of seats in buses S and T together were 345

C) Only one person can sit on one seat.

QUESTION- 1

#Q. What is the average of the vacant seats of buses Q, R and S together?

A. 64

B. 54

C. 48

D. 42

E. None of these

QUESTION- 2

#Q. If the number of vacant seats was distributed in a degree pie-chart, what would have been the approximate central angle for bus P?

A. 72°
B. 112.4°
C. 62.5°
D. 94.9°
E. None of these

QUESTION- 3

#Q. What is the ratio of the number of seats in bus R and S together and the number of seats filled in bus Q respectively?

A. 5 : 6

B. 10 : 11

C. 64 : 45

D. 7 : 9

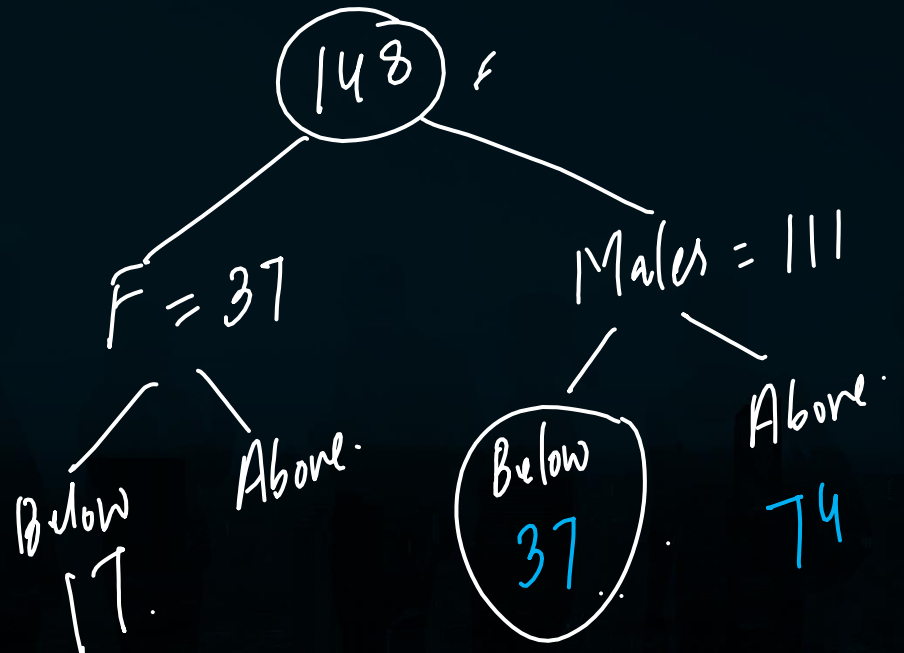
E. 11 : 15

QUESTION- 4

#Q. If 25% of the seats in bus T were occupied by females and the remaining seats were occupied by males. The number of seats occupied by females in bus T is equal to the number of seats occupied by males aging below 60 in bus T. Total number of males and females aging above 60 is 40 more than total number of males and females aging below 60, what is the number of females aging below 60?

A. 15
B. 17
C. 12
D. 19
E. Cannot be determined

185
148
37

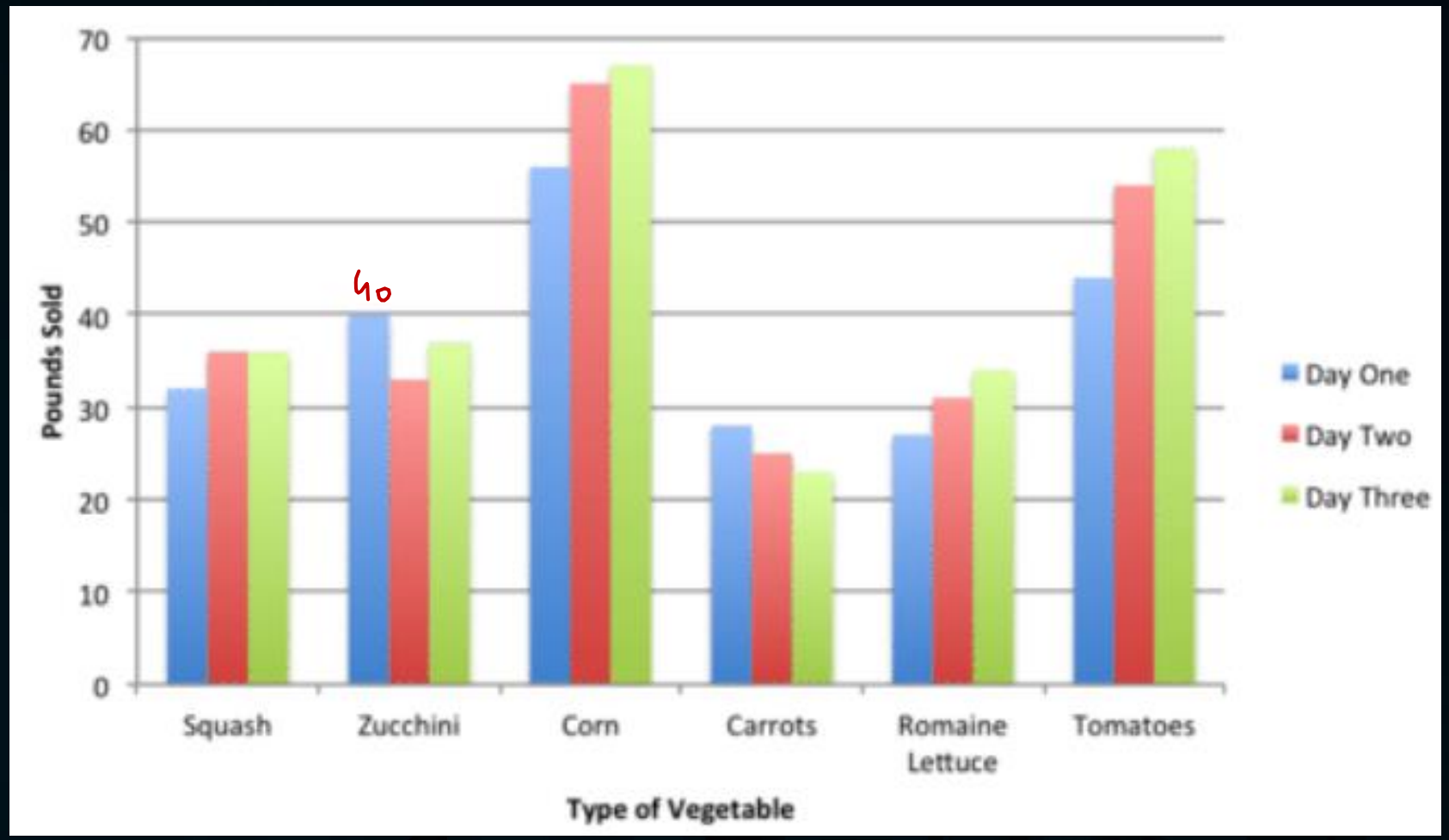


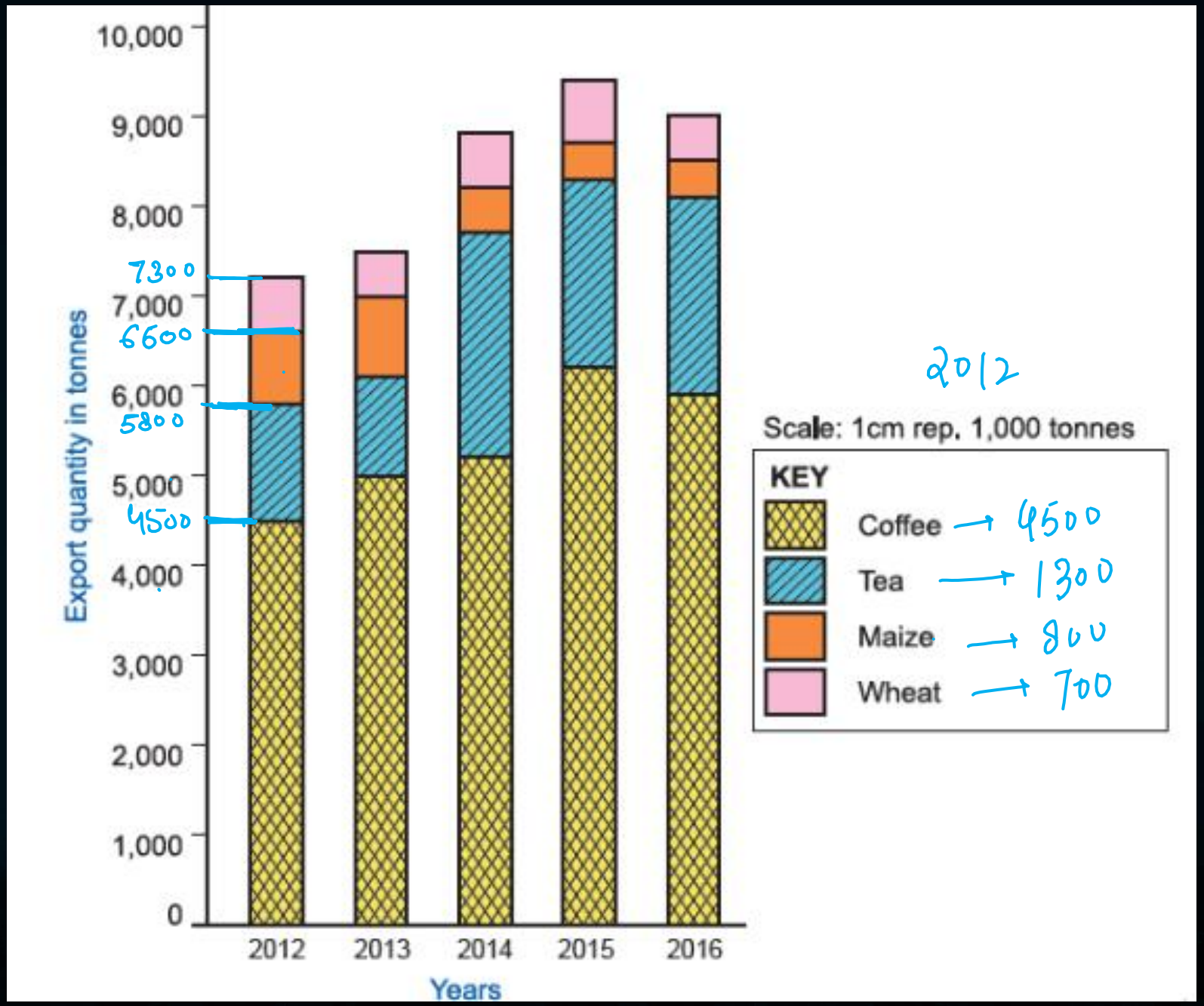
Above − Below = 40
Above + Below = 148

Above = 94
Below = 54

2A = 188
A = 94

Bar Graph


70
60
50
40
30
20
10
0
Pounds Sold
40
Squash
Zucchini
Corn
Carrots
Romaine Lettuce
Tomatoes
Type of Vegetable
Day One
Day Two
Day Three


10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Export quantity in tonnes
7300
6600
5800
4500
2012
2013
2014
2015
2016
Years
Scale: 1cm rep. 1,000 tonnes
KEY
Coffee → 4500
Tea → 1300
Maize → 800
Wheat → 700

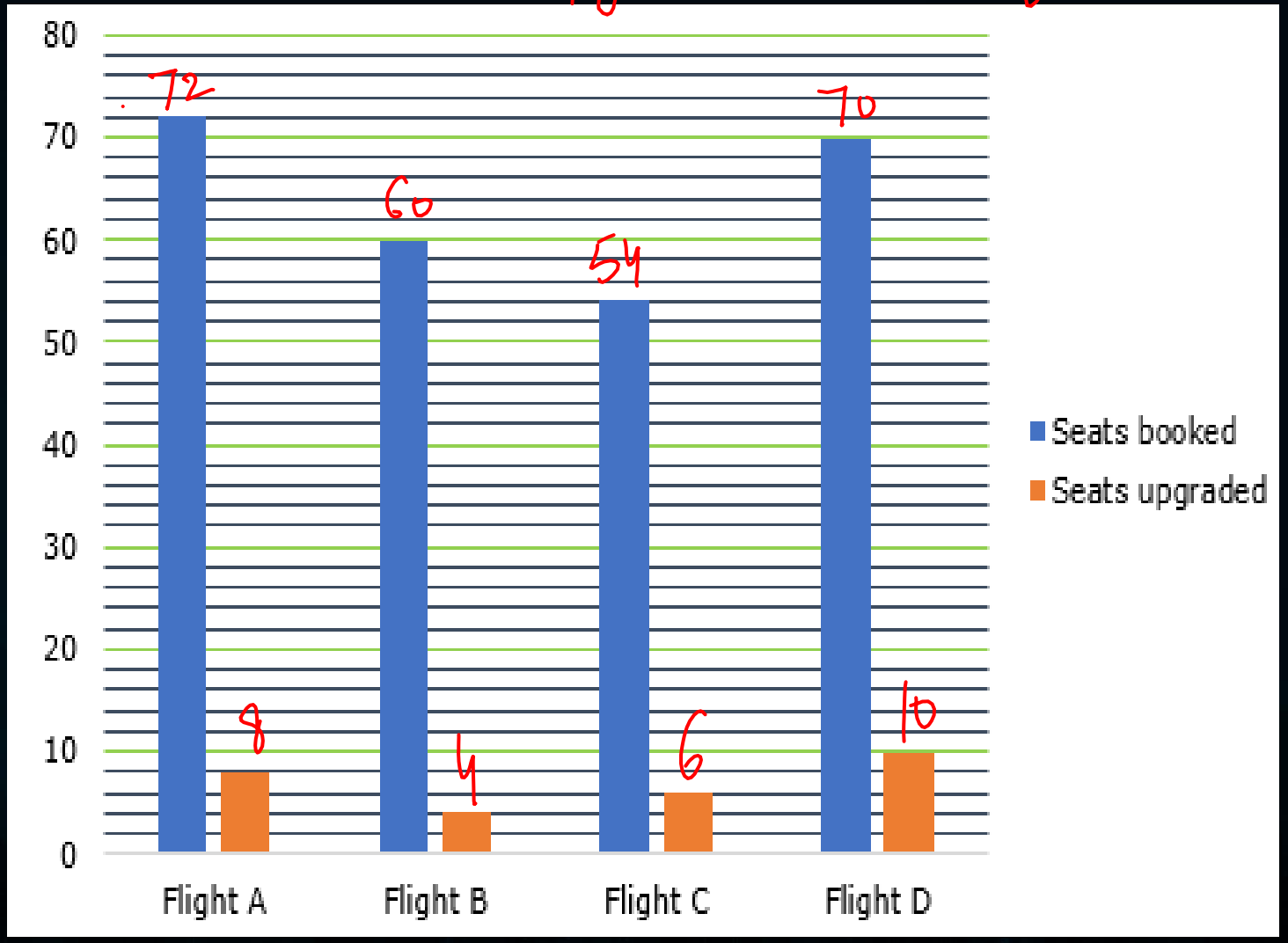
SET - 2

Read the following data and answer the given questions.

Booked = Upgraded + Not Upgraded

The bar graph given below shows the number of seats booked in 4 flights (A, B, C, and D) on a certain day. It also shows the number of seats that were upgraded in these flights.

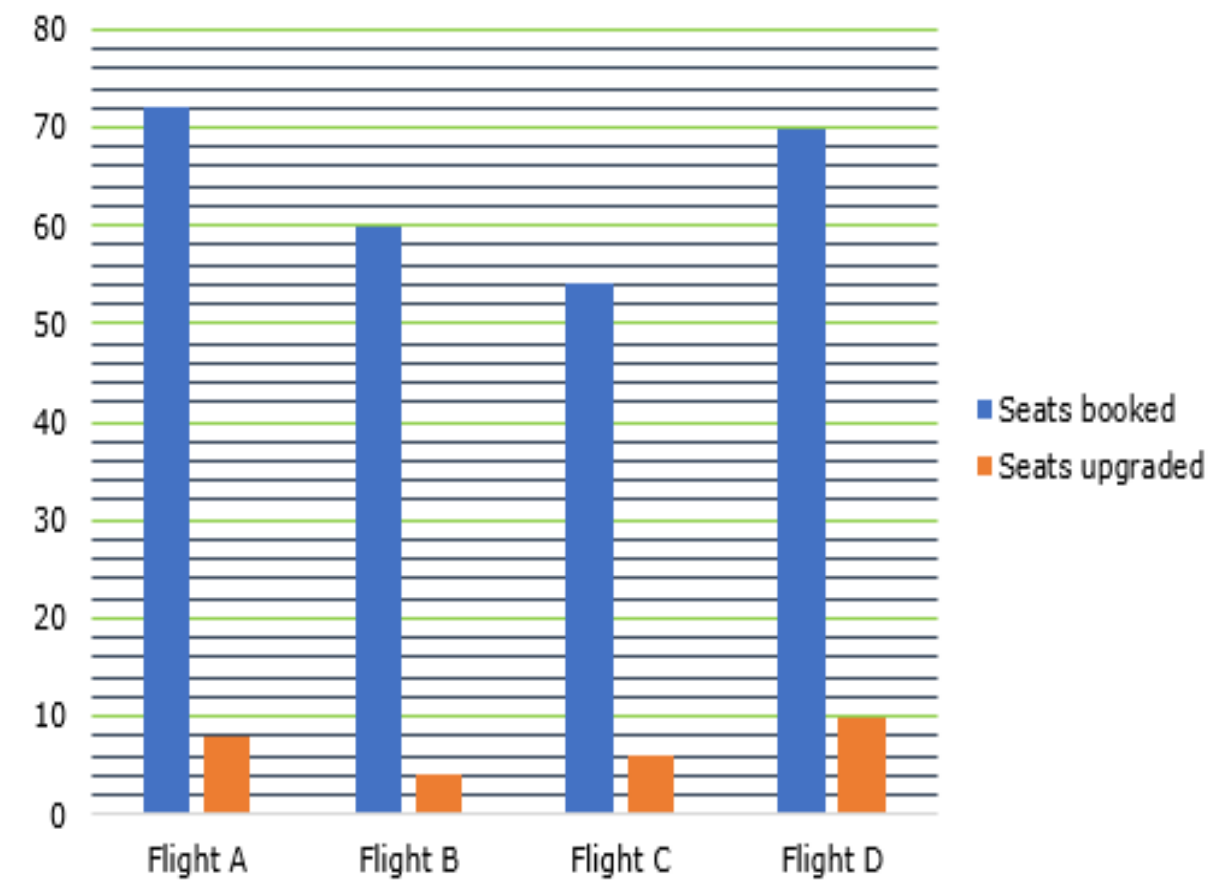
It is known that the booked seats were either upgraded or not upgraded. All the people booked exactly one flight.



QUESTION- 1

#Q. What is the difference between the total of number of seats not upgraded of Flights A and B and the number of seats not upgraded of Flight D?

A. 40 B. 50 C. 60 D. 80



$A = 72 - 8 = 64$

$B = 60 - 4 = 56$

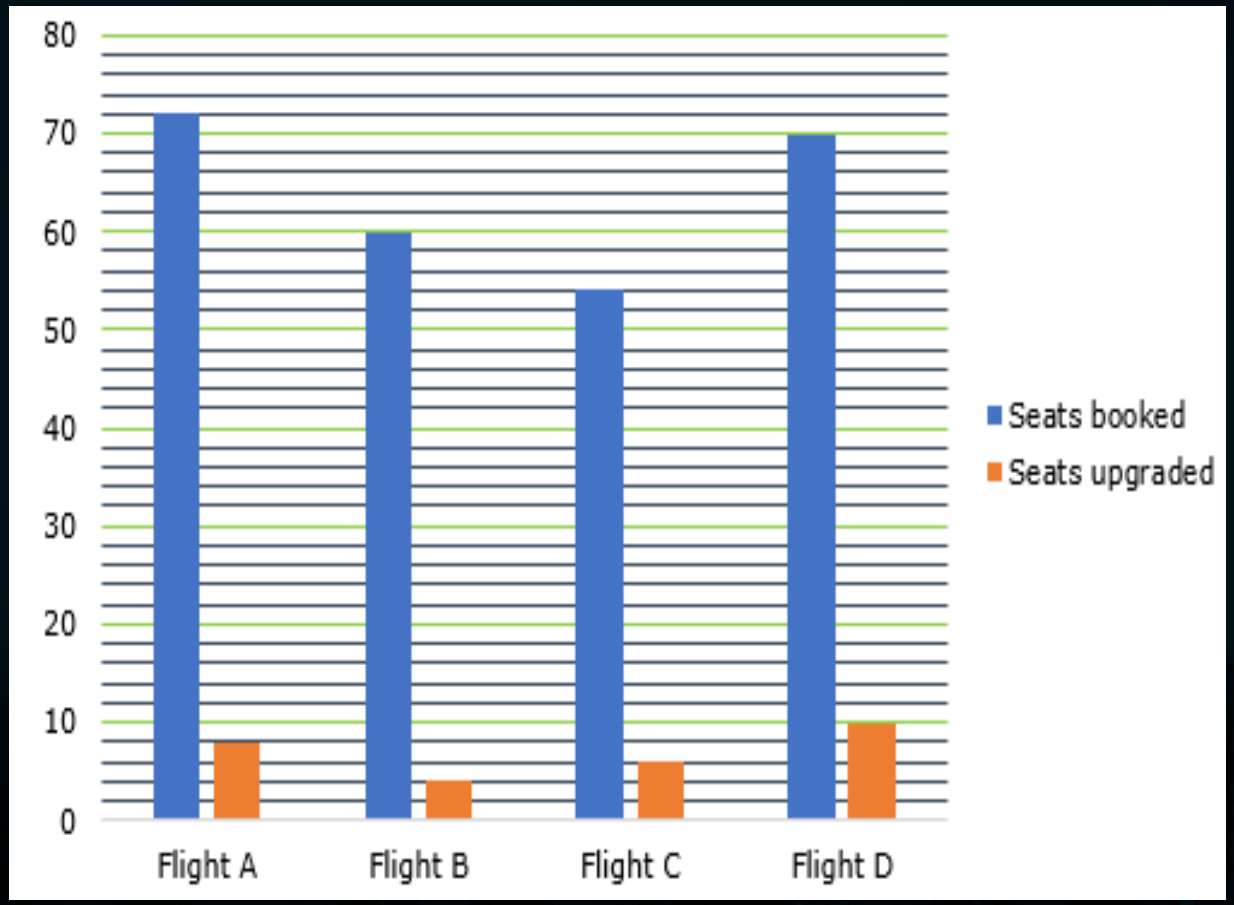
120

$D = 70 - 10 = 60$

QUESTION- 2

#Q. If out of the number of seats upgraded in Flight D, 20% of the seats were of women and number of booked seats of women in Flight D were 28.57% of total seats booked, what is the number of seats not upgraded of men who booked seats in Flight D?

A. 54 B. 48 C. 44 D. 42



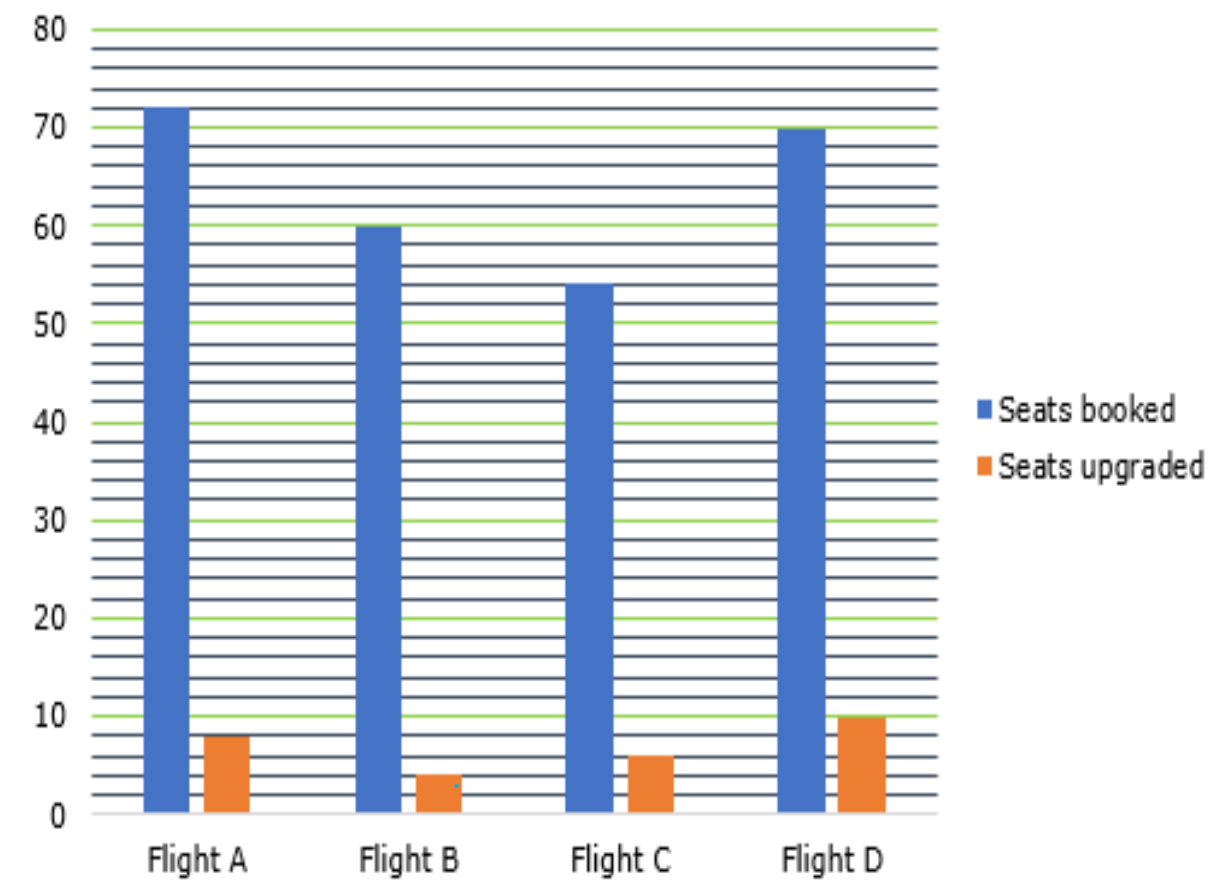
	W	M
up = 10	2	8
Booked = 70	20	50
Not up = 60	18	42

$28.57\% = \frac{2}{7}$

QUESTION- 3

#Q. If in another Flight E, number of seats booked are 16.66% more than the number of seats booked of Flight C and number of seats not upgraded in Flight E are 12.5% more than the number of seats not upgraded of Flight B, what is the number of seats upgraded in Flight E?

A. 0 B. 2 C. 4 D. 5



1/6

1/8.

Booked. = $54 + \frac{1}{6} \times 54 = 54 + 9$
$= 63$

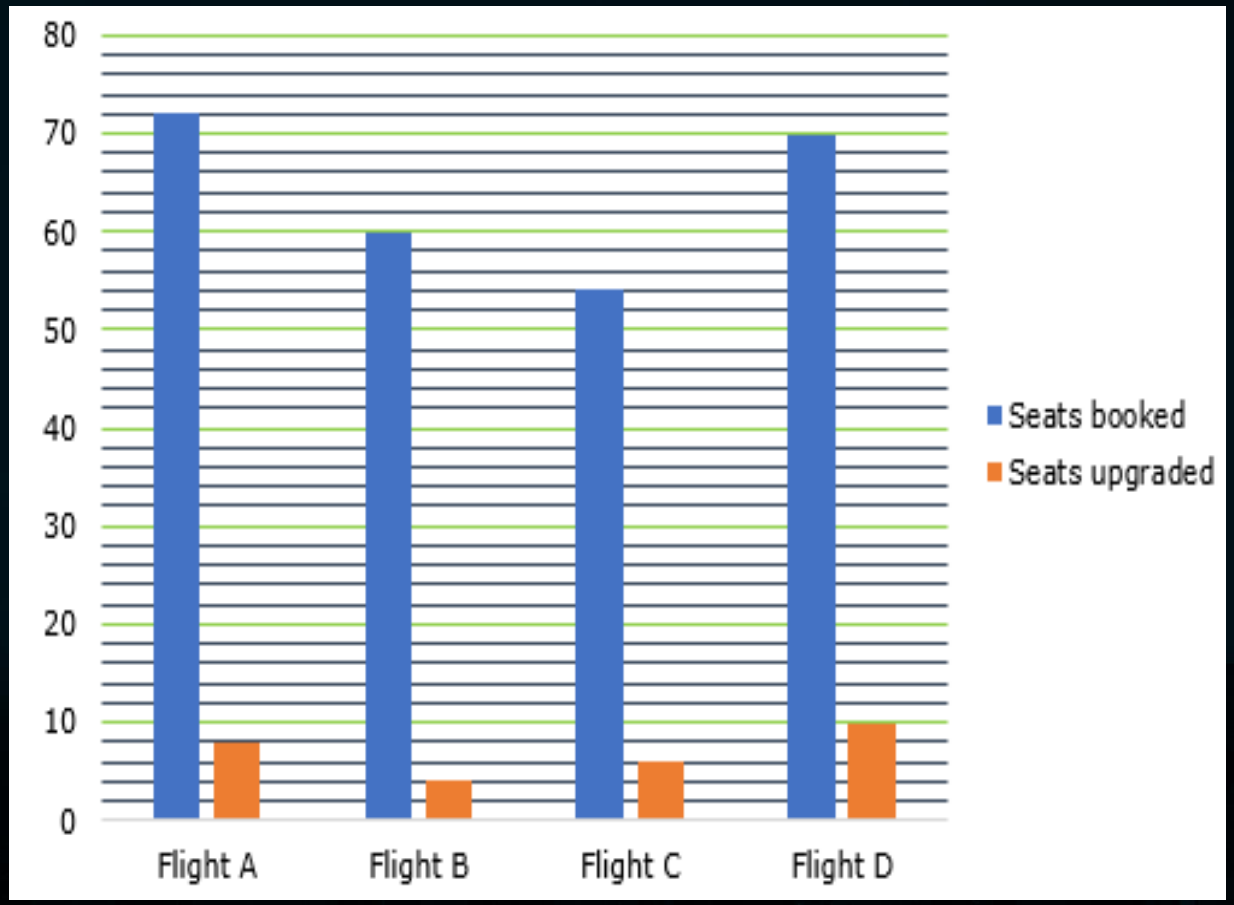
Not up $= 56 + \frac{1}{8} \times 56 = 56 + 7 = 63$

up = 0

QUESTION- 4

#Q. What percentage of the number of seats booked in Flight B is the number of seats upgraded in Flight A?

A. 3.33% B. 6.66% C. 10% D. 13.33%

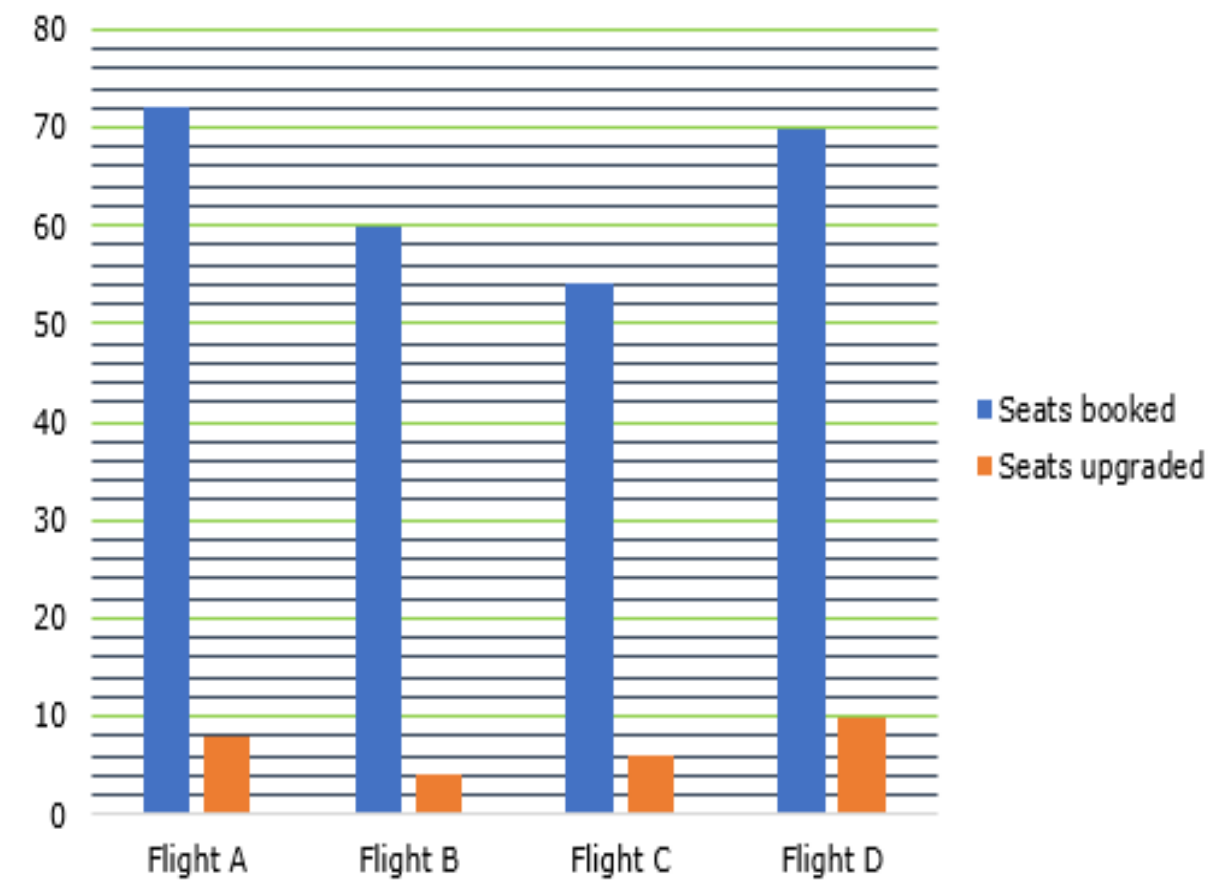


$\frac{8}{60} \times 100 = 13.33\%$

QUESTION- 5

#Q. What is the sum of the number of seats not upgraded in Flight C and number of seats booked of Flight A?

A. 102 B. 108 C. 110 D. 120



48 + 72

= 120

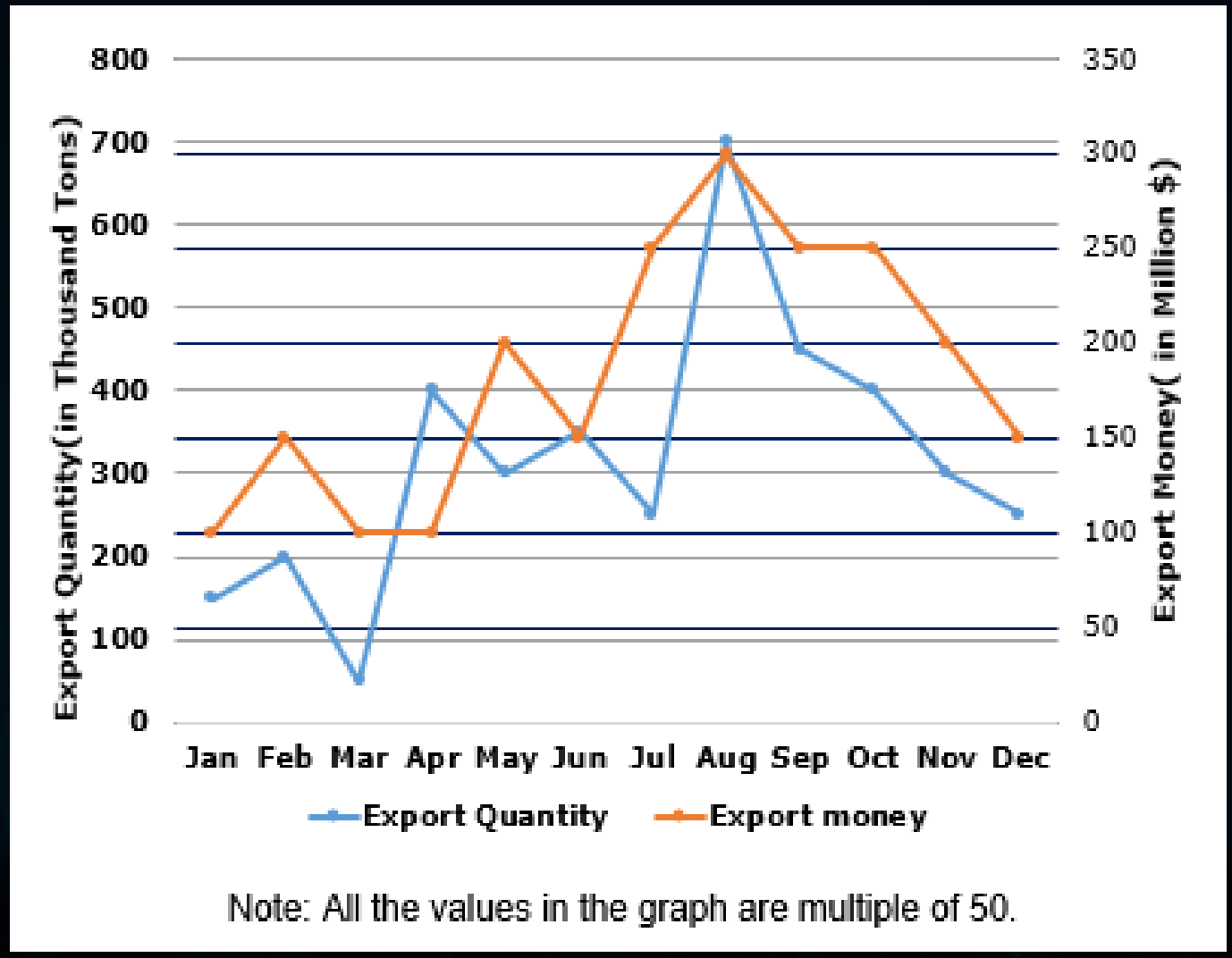
SET - 3

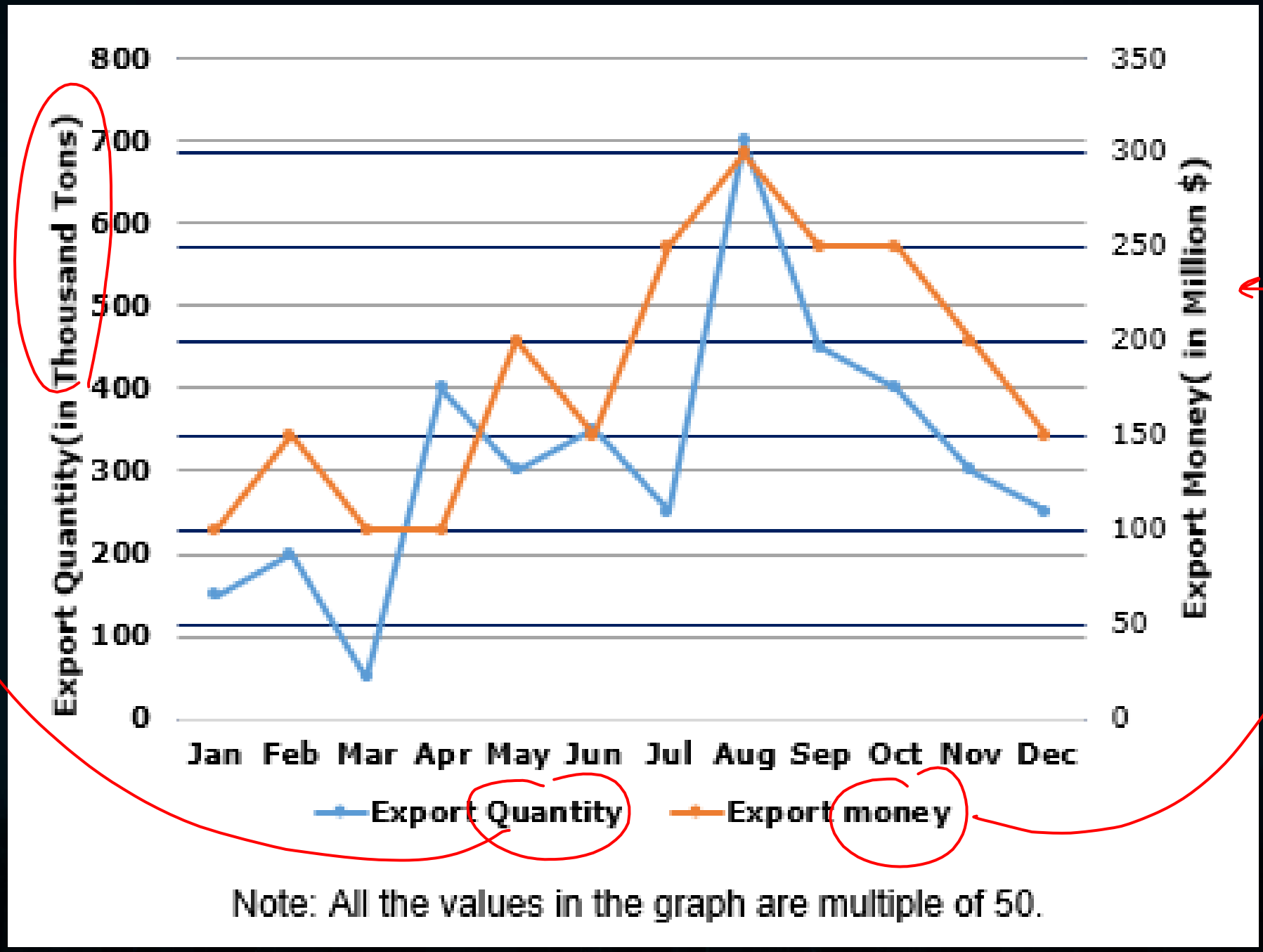
Line Graph

Read the following data and answer the given questions.

The graph shows the exports of copper from country X from January 2001 to December 2001.

Note: All the values in the graph are multiples of 50.





Note: All the values in the graph are multiple of 50.

1 mill = 10^6

QUESTION- 1

#Q. Which month witnessed the second least exports (volume) to exports (revenue) ratio?

A. March

B. January

C. December

D. July

Quantity

Money.

Quan / Money → Min

Money / Quan

	Quantity	Money	
Jan	150	100	3/2
Feb	200	150	4/3
Mar	50	100	1/2
Apr	400	100	4/1
May	300	200	3/2
Jun	350	150	7/3
Jul	250	250	1
Aug	700	300	7/3
Sep	450	250	9/5
Oct	400	250	8/5
Nov	300	200	3/2
Dec	250	150	5/3

QUESTION- 2

#Q. In how many months the average price per ton of copper has witnessed a growth between 5% to 30% (both inclusive) over the previous month?

A. 2

B. 3

C. 4

D. 1

$\frac{2}{3} \rightarrow \frac{3}{4}$

$8 \rightarrow 9$

$\frac{3}{4} \rightarrow 2$

$0.25 \rightarrow 0.66$

$\frac{3}{7} \rightarrow \frac{5}{9}$

$27 \rightarrow 35$

$\frac{8}{27} \times 100$

$\frac{5}{9} \rightarrow \frac{5}{8}$

$8 \rightarrow 9$

$\frac{5}{8} \rightarrow \frac{2}{3}$

$15 \rightarrow 16$

	Quantity	Money	
Jan	150	100	2/3 ✓
Feb	200	150	3/4 ✗
Mar	50	100	2 ✗
Apr	400	100	1/4 ✗
May	300	200	2/3 ✗
Jun	350	150	3/7 ✗
Jul	250	250	1 ✗
Aug	700	300	3/7 ✓
Sep	450	250	5/9 ✓
Oct	400	250	5/8 ✓
Nov	300	200	2/3 ✓
Dec	250	150	3/5 ✗

QUESTION- 3

#Q. What is the average price, in dollars, per ton of copper in December?

A. $6.00

B. $60.00

C. $600.00

D. $6000.00

$$\frac{\text{Money}}{\text{Quantity}} = \frac{150 \times 10^6}{250 \times 10^3}$$

$$= \frac{150\ 000}{250}$$

$$= 600$$

	Quantity	Money	
Jan	150	100	
Feb	200	150	
Mar	50	100	
Apr	400	100	
May	300	200	
Jun	350	150	
Jul	250	250	
Aug	700	300	
Sep	450	250	
Oct	400	250	
Nov	300	200	
Dec	250	150	

QUESTION- 4

#Q. What was the maximum price of copper per ton in any of the above months?

A. $600

B. $750

C. $1000

D. $2000

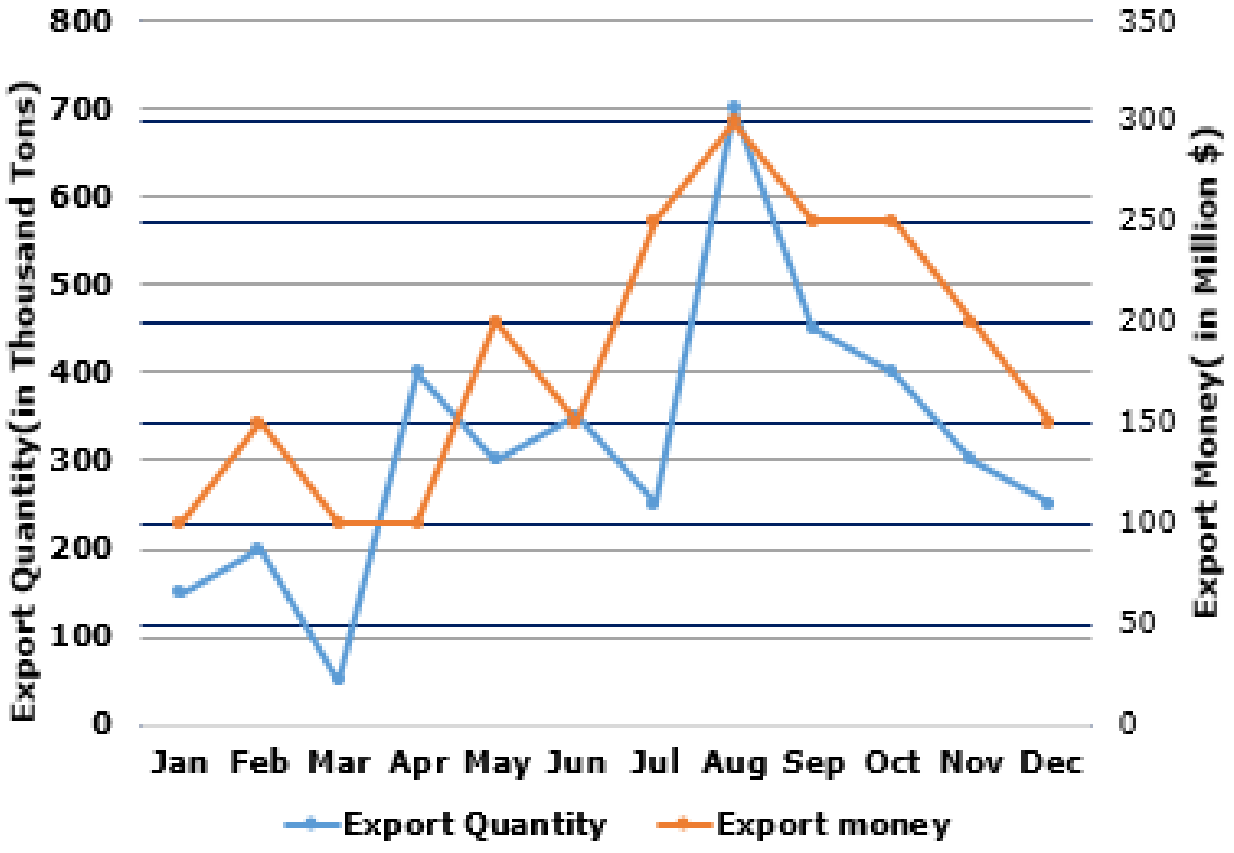
Money → Max

Quan

$$\frac{100 \times 10^6}{50 \times 10^3} = 2000$$

	Quantity	Money	
Jan	150	100	
Feb	200	150	
Mar	50	100	
Apr	400	100	
May	300	200	
Jun	350	150	
Jul	250	250	
Aug	700	300	
Sep	450	250	
Oct	400	250	
Nov	300	200	
Dec	250	150	

Analysis



Note: All the values in the graph are multiple of 50.

	Quantity	Money	
Jan	150	100	
Feb	200	150	
Mar	50	100	
Apr	400	100	
May	300	200	
Jun	350	150	
Jul	250	250	
Aug	700	300	
Sep	450	250	
Oct	400	250	
Nov	300	200	
Dec	250	150	

QUESTIONS

#Q. Which month witnessed the second least exports (volume) to exports (revenue) ratio?

A. March B. January C. December D. July

#Q. In how many months the average price per ton of copper has witnessed a growth between 5% to 30% (both inclusive) over the previous month?

A. 2 B. 3 C. 4 D. 1

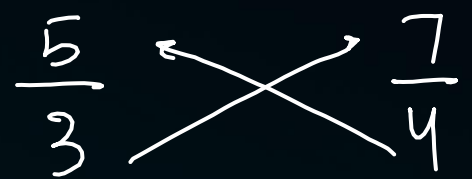
#Q. What is the average price, in dollars, per ton of copper in December?

A. $6.00 B. $60.00 C. $600.00 D. $6000.00

#Q. What was the maximum price of copper per ton in any of the above months?

A. $600 B. $750 C. $1000 D. $2000

Initial ⟶ Final.



$20 \longrightarrow 21$

$\frac{1}{20} \times 100 = 5\%$


THANK
You
52%
64%
85%
26,465.54
28,161.92
26,465.54
198.45
37,492.43
201.55
1,097.95
0.00
26,717.43
7,534.44
12,512.54
28,875.56