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An ISO 9001:2015 Certified Institution, Approved by AICTE - New Delhi, Affiliated to Anna University - Chennai
PONNUSAMY NAGAR, SALEM ROAD(NH-44), NAMAKKAL - 637003. TAMILNADU.
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Selvam College of Technology

Name of the Bundle	Proficient Bundle V2	Subject	Aptitude
Topic	DATA INTERPRETATION	Last updated on	29 January 2024

LINE GRAPH

Directions (1-5) Study the following line graph carefully and answer the questions given below.
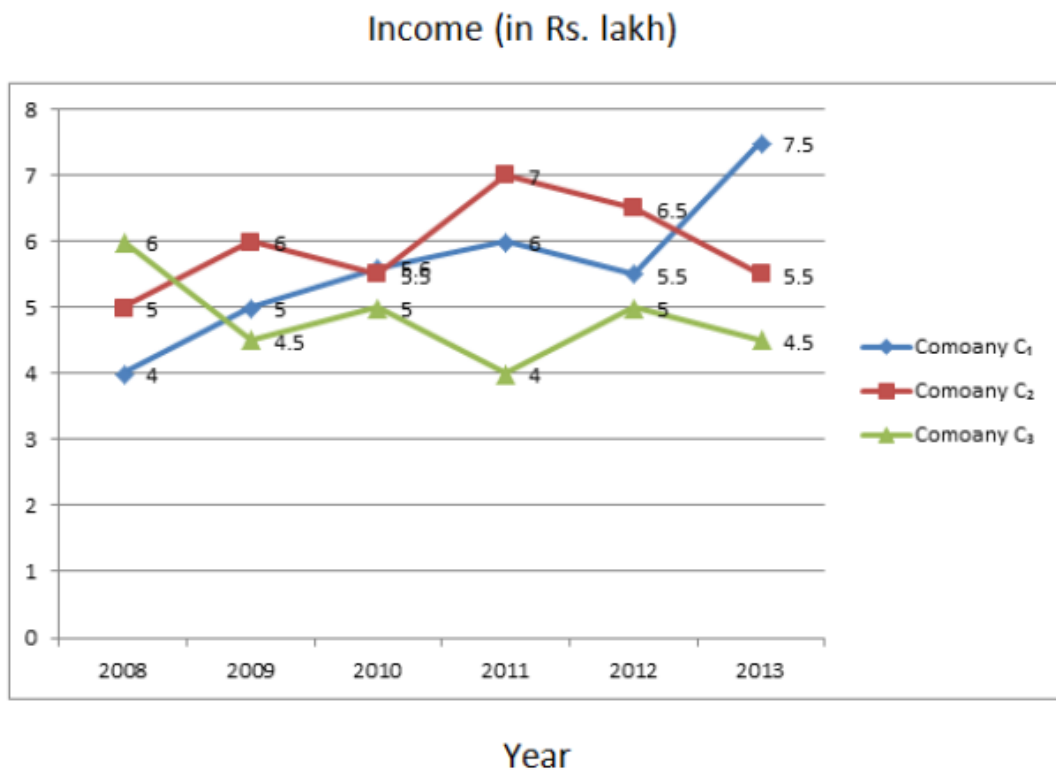
Income (in Rs. lakh)

Year

- Comoany C$_1$
- Comoany C$_2$
- Comoany C$_3$

1)The percentage increase or decrease in the income of the company is highest in which of the following years?

a)2013   b)2012   c)2011   d)2009   e)2010

Ans: c)2011

Explanation

Formula

$$\text{Profit \%} = \frac{Income - Expenditure}{Expenditure} \, x100$$

For the year,

2009 ----------> Profit % $= \frac{6-5}{5} x100$ = +20% (increase)

2010 ----------> Profit % $= \frac{5.5-6}{6} x100$ = -8.3% (decrease)

2011 ----------> Profit % $= \frac{7-5.5}{5.5} x100$ = +27.27% (increase)

2012 ----------> Profit % $= \frac{6.5-7}{7} x100$ = -7.14% (decrease)

2013 ----------> Profit % $= \frac{5.5-6.5}{6.5} x100$ = -15.3% (decrease)

Hence The percentage increase or decrease in the income of the company C2 is highest in 2011.

2. If the expenditure of company C_1 in the year2009 was Rs. 2.25 lakh, then what was the profit percentage of C_1 in that year?

a) 124%   b) 112%   c) 122%   d) 108%   e) 118%

Ans: c) 122%

Explanation

Formula

$$Profit \% = \frac{Income - Expenditure}{Expenditure} \times 100$$

COMPANY C_1

For the year,

2009 -----------> Profit % = $\frac{5 - 2.25}{2.25} \times 100$ = +122 (increase)

3. If the profit percentage of company C_2 in the year 2011 is 20%, what was its expenditure in that year? (in Rs, lakh)

a) 5.83   b) 4.58   c)4.12   d) 6.83   e) 3.45

Ans: a) 5.83

Explanation

Formula

$$Profit \% = \frac{Income - Expenditure}{Expenditure} \times 100$$

COMPANY C_2

For the year,

2011 -----------> 20% = $\frac{7 - Expenditure}{Expenditure} \times 100$

= 20 Expenditure =700 -100 Expenditure

=120 Expenditure =700

700/120=Rs.5.83Lakh

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4. What is the average income of company C_3 over all the years? (In Rs. lakh)

a) 4.63   b) 3.83   c) 4.83   d) 4.23   e) 4.18

Ans: c) 4.83

Explanation

FORMULA

$$\text{Average} = \frac{Sum}{Total}$$

COMPANY C_3

Average income of company C_3= $\frac{6+4.5+5+4+5+4.5}{6}$ = $\frac{29}{6}$ =4.83

5. What was the approximate percentage increase in the income of company C_1 in the year 2010 as compared with the year 2008?

a) 40%   b) 36%   c) 32.5%   d) 34.75%   e) 31%

Ans: a) 40%

Explanation

FORMULA

$$\text{Profit \%} = \frac{Income - Expenditure}{Expenditure} \; x100$$

COMPANY C_1

2008 ----------->   Profit % = $\frac{5.6-4}{4}$ $x100$ = +40(increase)

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PIE CHART

Directions (6-10) The following pie-charts show the run scored by a batsman against different countries in one-day internationals (ODI) and Twenty (T20) world cup matches. Runs scored by the batsman in ODI and T20 are 2800 and 2000 respectively.
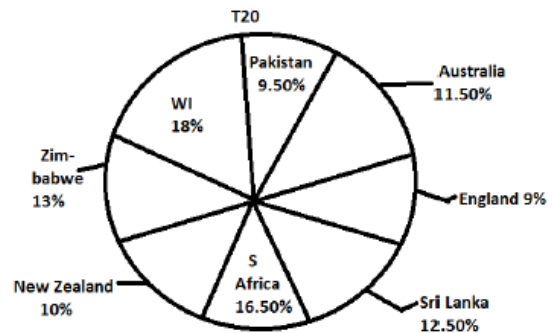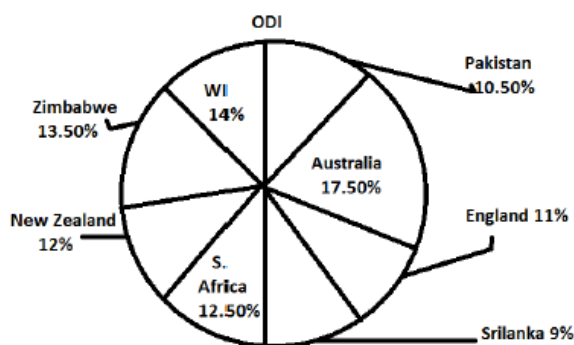
6. If the batsman played 14 innings against Sri Lanka in ODI and remained not out in 5 innings. Find his average runs scored against Sri Lanka.

a) 28   b) 24   c) 26   d) NONE   e) 22

Ans: a) 28

Explanation

Total Runs scored by the batsman in ODI =2800

Sri lanka scored **9%** (From the pie chart)

Total runs scored by srilanka in ODI =(2800x9/100)=252.

FORMULA

$$Average = \frac{Sum\ of\ the\ runs\ in\ ODI\ (By\ srilanka)}{Total\ no\ of\ innings}$$

$$Average = \frac{252}{14-5} = 28$$

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7. Runs scored by the batsman against New Zealand in T20 matches are approximately what percent of the runs scored against Pakistan in ODI?

a) 64%   b) 66%   c) 62%   d) NONE   e) 68%

Ans: b) 68%

Explanation

New Zealand in T20 approximately what percent against Pakistan in ODI

$$Percentage\% = \frac{Pakistan\ runs\ in\ ODI}{New\ Zealand\ runs\ in\ T20} \times 100$$

Total Runs scored by the batsman in T20 =2000

New Zealand scored 10% (From the pie chart)

Total runs scored by Pakistan in ODI = (2000x10/100) =200

Total Runs scored by the batsman in ODI =2800

Pakistan scored 10.50% (From the pie chart)

Total runs scored by Pakistan in ODI =(2800x10.50/100)=294

$$Percentage\% = \frac{200}{294} \times 100$$

=68%

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8. In which of the following countries, the difference between the runs scored in ODI and T20 is the second lowest?

a) Sri Lanka   b) Pakistan   c) South Africa   d) WI   e)NONE

Ans: c) South Africa

Explanation

	ODI	T20	Difference
Sri lanka	9% = (2800*9/100) =252	12.5% =(2000*12.5/100) =250	2
Pakistan	10.5% = (2800*10.5/100) =294	9.50% = (2000*9.5/100) =190	104
South Africa	12.5% = (2800*12.5/100)=224	16.50% =(2000*16.5/100) =330	6
WI	14% = (2800*14/100) =392	18% = (2000*18/100) =360	32

9. The runs scored by the batsman against WI in T20 is approximately what percent of the runs scored against Australia in ODI?

 a) NONE   b) 71%   c) 75%   d)73%   e) 69%

Ans: d)73%

Explanation

New Zealand in T20 approximately what percent against Pakistan in ODI

$$\text{Percentage\%} = \frac{WI\ runs\ in\ T20}{Australia\ runs\ in\ ODI} \times 100$$

West Indies

Total Runs scored by the batsman in T20 =2000

West Indies scored 18% (From the pie chart)

Total runs scored by West Indies in ODI = (2000x18/100) =360

Australia

Total Runs scored by the batsman in ODI =2800

Australia scored 17.50% (From the pie chart)

Total runs scored by Pakistan in ODI =(2800x17.50/100)=490

$$\text{Percentage\%} = \frac{360}{490} \times 100$$

=73%

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10. If the batsman had scored 280 runs against Pakistan in T20 matches, What would have been its percentage in the T20 match, if the total runs scored in T20 remains the same?

a) NONE   **b) 12%**   **c) 16%**   **d) 14%**   **e) 10%**

Ans: d) 14%

Explanation:

Score of a batsman =280

Total runs in T20 =2000

$$Percentage\% = \frac{280}{2000} \times 100$$

Percentage = 14%

Directions (11-16) Study the table carefully and answer the questions given below.Details of employee deployed at different levels by a company in different departments

Department	Manager		Officer	
	Number	M : F	Number	M : F
Operations	2200	7 : 4	2800	6 : 8
Public relations	1800	5 : 4	2500	9 : 11
Finance	2500	14 : 11	3200	17 : 15
Advertising	2900	12 : 17	1600	9 : 7
Sales	2400	9 : 7	2600	8 : 5
Procurement	2700	5 : 4	2200	9 : 13

11. The total number of female employees (Managers and Officers) in the Procurement department is approximately by what per cent more than their male counterparts?

a) 2%   b) 6%   c)4.4%   d) 8%   e) 9%

Ans: c)4.4%

Explanation

PROCUREMENT DEPARTMENT

Male manager =   5/9 (2700) =1500

Female manager= 4/9(2700)=1200

Male officers =9/22 (2200)=900

Female officers=13/22 (2200)=1300

Total Female employees =1200+1300=2500

Total male employees=1500+900=2400

What per cent more

{(2500-2400)/2400}*100 =(100/2400)*100=4.4%

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12. The number of female managers in Finance department is what percent of the total number of male managers in Sales department?

a) 77%   b)82%   c) 78%   d) 84%   e) 81%

Ans: e) 81%

Explanation

FINANCE DEPARTMENT

Female managers in Finance Department={11/25}*2500=1100

Male managers in sales Department ={9/16}*2400=1350

What per cent

(1100/1350) *100= 81%

13. What is the ratio of the total number of female managers in Operations and Finance departments to that of male officers in these two departments?

a) 25:29   b) 19:26   c) 19:25   d) 19:29   e) 22:29

Ans:d) 19:29

Explanation

OPERATION & FINANCE DEPARTMENT

Female managers in Operation and Finance Department together

= [{4/11}*2200]+[{11/25}*2500   =800+1100 =1900

Male managers in Operation and Finance Department together

= [{6/14}*2800]+[{17/32}*3200   =1200+1700 =2900

RATIO

          1900: 2900   = 19:29

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14.The total number of male officers in Advertising and Sales departments is approximately what per cent the total number of officers in these two departments?

a) 55.8%   b) 56%   c) 57.5%   d) 54%   e) 59.5%

Ans:e) 59.5%

Explanation

ADVERTISING & SALES DEPARTMENT

Male officers in Advertising and sales Department together

= [{9/16} *1600]+[{8/13}*2600   =900+1600 =2500

What percent

       { 2500/(1600+2600)}*100=59.5%

15. What is the difference between the total number of female officers in the Advertising and Public Relations department and the total number of female managers in these two departments?

 a) 405   b)415   c) 425   d) 435   e) 395

  Ans: c) 425

Explanation

ADVERTISING & PUBLIC RELATIONS DEPARTMENT

Female officers in Advertising and public relations Department together

= [{7/16}*1600]+[{11/20}*2500   =700+1375 =2075

Female managers in Advertising and public relations Department together

= [{17/29}*2900]+[{4/9}*1800   =1700+800 =2500

Difference==➔ 2500-2075 =425

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16. What is the ratio of the total number of managers in the Public relations, Finance, Sales and Operations department to the total number of officers in Finance, Advertising. Sales and procurement department?

a) 89:95   b) 87:96   c) 87:89   d) 93:95   e) 89:96

Ans: e) 89:96

Explanation

Required ratio

(1800+2500+2400+2200): (3200+1600+2600+2200)

8900 :9600 =89:96

Directions (17-22) On the occasion of a cultural program in a stadium, there are 400 artists in all who are participating in four different events viz- Drama, Dance, Skit, and Singing. The ratio of male to female artists is 2:3. 25% of the female artists are participating in Drama. 40% of the female artists are participating in Dance. The remaining female artists are participating in Skit and Singing in the ratio of 4:3. The ratio of male artists who are participating in Drama and other events together is 1:7. 25% of those male artists who are not participating in Drama are participating in Singing. The remaining male artists are participating in Dance and Skit in the ratio of 3:4.

Explanation

Ratio of male and female =2:3

  (2/5) * 400=160   Male

(3/5) *400=240   Female

	Male(160)	Female (240)
Drama	(1*160)/8 =20	(25/100) *240=60
Dance	(3*105)/7=45	(40/100) *240=96
Skit	105 *(4/7) =60	(4/7) *84=48
Singing	(25*140)/100 =35	(3/7) *84 =36

17. What is the total number of female artists who are participating in Drama and Skit together?

a)106   b) 104   c) 108   d)112   e) 110

Ans: c) 108

DRAMA & SKIT TOGETHER (Female artists)

Total Number of artists =60+48 =108

18. What is the difference between the male artists participating in Skit and the female artists participating in Singing?

a) 20   b) 24   c) 22   d) 25   e) 21

Ans: b) 24

 SKIT (Male artists) & SINGING (Female artists)

Total Number of artists =60-36 =24

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19. What is the ratio of the female artists participating in singing to the male artists participating in dance?

a) 2:3   b) 5:6   c) 3:4   d) 6:7   e) 4:5

Ans: e) 4:5

 (Female artists) SINGING: DANCE (Male artists)

                    36:45   = 4:5

20. What is the total number of artists participating in dance and drama together?

a) 221   b) 222   c) 208   d)228   e) 218

Ans: a) 221

Male & Female (Dance &Drama together)

(20+45) + (60+96)=65+156 =221

21) What is the ratio of the male artists participating in Singing to the female artists participating in Skit?

a) 39:47   b) 38:47   c)36: 47   d) 35:48   e)35 :47

Ans: d) 35:48

(Male artists) SINGING: SKIT (Female artists)

                              =35:48