IBPS RRB 2021 Quantitative Aptitude Practice PDF with Solution

1. If the total investment of a business amounts to Rs. 50000. Avih invested Rs. 4000 more than that of Mani and Mani invested 5000 more than that of Loki . At the end of the year, total profit was Rs. 35000 then what should be the profit share of Avih?
A. Rs. 14700
B. Rs. 15000
C. Rs. 16800
D. Rs. 17880
E. Rs. 18800

2. Raj Kumar got the result of his 8th class. Each subject consists of a maximum of 140 marks. If he scores 98 marks in science; 129 marks in sanskrit; 131 marks in Maths, 110 marks in English and 120 marks in Hindi, what was his percentage of marks in all the five subjects?
A. 84%
B. 82%
C. 77%
D. 79%
E. None of these

3. Kirti started from her home to station at 8.30 am with an average speed of 25 km/hr but reached the station 8 minutes after the train departed. If she had travelled with an average speed of 30 km/hr, she would have reached the station 4 minutes before the departure of the train. Find the time of the departure of the train.
A. 9.30 am
B. 9.34 am
C. 9.38 am
D. 9.42 am
E. Cannot be determined

4.There taps A, B and C can fill a tank in 20, 30 and 40 minutes respectively. All the taps are opened simultaneously and after 5 minutes tap A was closed and then after next 6 minutes tap B was closed. At that moment a leak developed which can empty the full tank in 60 minutes. What is the total time taken (in minutes) for the tank to be completely full?
A. 24
B. 36
C. 44
D. 18
E. None of these

Direction: What should come in place of the question mark '?' in the following questions?
5. $4.2^2 + 8.6^2 - 6.2^2 = ?^2 + 4.16$
A. 5

B. 7
C. 9
D. 11
E. 6

Direction: What should come in place of the question mark '?' in the following questions?

6. $6\frac{2}{3} + 7\frac{4}{3} - 4\frac{5}{8} + ? = 8\frac{7}{9} + 3\frac{4}{9}$

A. $\frac{133}{72}$

B. $\frac{125}{72}$

C. $\frac{113}{72}$

D. $\frac{115}{72}$

E. $\frac{127}{72}$

Direction: What should come at the place of question mark (?) in the following question?

7. $\sqrt{?}\%$ of $160 = 64 \div 2$
A. 40
B. 400
C. 20
D. $\sqrt{20}$
E. None of these

Direction: What should come in place of question mark (?) in the following questions?
8. (192 % of 175) − (306 ÷ 18) =? − 17 × 34 + 11^2
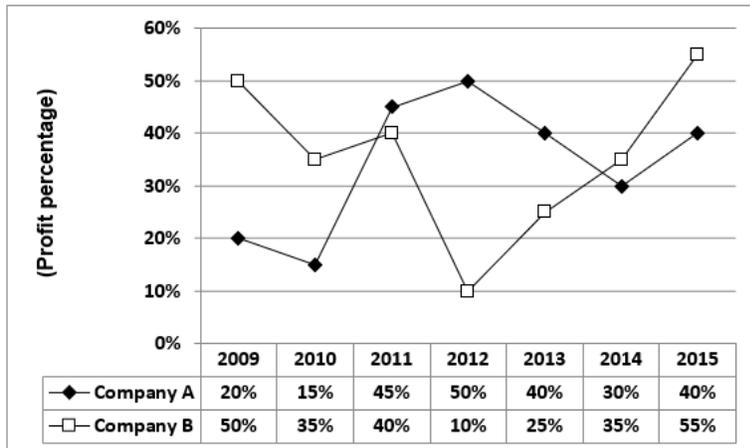A. 780
B. 776
C. 784
D. 788
E. 792

Direction: Study the following graph carefully to answer the questions:
The line-graph given below shows the percentage of profit earned by two companies A and B over the given years.

	2009	2010	2011	2012	2013	2014	2015
Company A	20%	15%	45%	50%	40%	30%	40%
Company B	50%	35%	40%	10%	25%	35%	55%

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

9. If every year, income of company A increases by 25% over the previous year and income in the year 2008 was Rs. 1104 lakh, then what was the total profit made by company A in the year 2009 and 2010 together?
A. Rs. 375 lakh
B. Rs. 508 lakh
C. Rs. 455 lakh
D. Can't be determined
E. None of these

10. If the expenditure of company B in the year 2014 was Rs. 280 lakhs, then what was the sum of income and profit of company B in the year 2014?
A. Rs. 196 lakhs
B. Rs. 378 lakhs
C. Rs. 424 lakhs
D. Rs. 476 lakhs
E. None of these

11. What is the average amount of profit earned by company A over the given years?
A. Rs. 41.67 lakhs
B. Rs. 43.32 lakhs
C. Rs. 42.67 lakhs
D. Can't be determined
E. None of these

12. If in the year 2015, income of both the companies A and B were same, what was the respective ratio of their expenditure in that year?
A. 28 : 31
B. 31 : 28
C. 28 : 25
D. Can't be determined

E. None of these

13.Ratio of income of company A and company B in the year 2013 was 7 : 15. If the total expenditure of company A and B together in the year 2013 was Rs. 697 lakh, then what was the total profit earned by company A and company B together in the year 2013?
A. Rs. 205 lakhs
B. Rs. 190 lakhs
C. Rs. 180 lakhs
D. Rs. 215 lakhs
E. None of these

Direction: In the given series one number is wrong, find out the wrong number.
14. 59, 60, 64, 73, 84, 114
A. 59
B. 60
C. 84
D. 114
E. 64

Direction: What should come in place of the question mark (?) in the following number series?
15. 256, 160, 108, 78, ?, 45.5, 34.75
A. 63
B. 61
C. 55
D. 57
E. 59

ANSWERS

1. Ans. A.
 If Loki, Mani and Avih have the investment of Rs. I, Rs. (I+5000) and Rs. (I+9000) respectively.
Then, I+(I+5000)+(I+9000) =50000 ⇒ 3I = 36000 ⇒ I =12000.
So,
Loki =Rs. 12000, Mani = Rs. 17000 and Avih = Rs. 21000
Avih : Mani : Loki = 21000 : 17000: 12000 = 21: 17: 12

Share of Avih = Rs. (35000 x$\frac{21}{50}$) = Rs. 14700
2. Ans. A.
Total marks obtained by Raj Kumar
$=98+129+131+110+120=588$

Total maximum marks $=140 \times 5 = 700$

$\therefore$ Percentage of marks $= \dfrac{588 \times 100}{700} = 84\%$

3. Ans. B.

Time difference between both the trips = $8 + 4 = 12$ minutes = $\dfrac{12}{60} = \dfrac{1}{5}$ hour

Let the distance between her home and station be 'x' km

So, $\dfrac{x}{25} - \dfrac{x}{30} = \dfrac{1}{5}$

$5x = 150, x = 30\ km$

So, the time taken by Kirti to reach station if she will travel with a speed of 25 km/hr = $\dfrac{30}{25} = 1.2\ hours = 1\ hour\ 12\ minutes$

So, the time of departure of train = $8:30 + 1:12 - 0:08 = 9:34\ am$

So option (B) is the correct answer.

4. Ans. A.

Portion of the tank filled in 5 minutes
= 5[1/20 + 1/30 + 1/40] = 13/24

Potion of the tank filled by B and C in the next 6 minutes = 6[1/30 + 1/40] = 7/20

Portion of the tank which is yet to be filled = 1-[13/24 + 7/20] = 13/120

Time taken by C fill the tank taking into consideration the leak as well

$\dfrac{13/120}{(\frac{1}{40} - \frac{1}{60})} = \dfrac{13}{120} \times 120$ = 13 minutes

Total time taken = 5 + 6 + 13 = 24 minutes

5. Ans. B.

$\Rightarrow$ 17.64 + 73.96 − 38.44 = ?^{2} + 4.16

$\Rightarrow$ 91.6 − 38.44 = ?^{2} + 4.16

$\Rightarrow$ 53.16 = ?^{2} + 4.16

$\Rightarrow$?^{2} = 53.16 − 4.16

$\Rightarrow$?^{2} = 49

$\Rightarrow$? = $\sqrt{49}$

$\Rightarrow$? = 7

6. Ans. A.

$\Rightarrow \dfrac{20}{3} + \dfrac{25}{3} - \dfrac{37}{8} + ? = \dfrac{79}{9} + \dfrac{31}{9}$

$\Rightarrow ? = \dfrac{79}{9} + \dfrac{31}{9} - \dfrac{20}{3} - \dfrac{25}{3} + \dfrac{37}{8}$

$\Rightarrow ? = \dfrac{632 + 248 - 480 - 600 + 333}{72}$

$\Rightarrow ? = \dfrac{1213 - 480 - 600}{72}$

$\Rightarrow ? = \dfrac{1213 - 1080}{72}$

$\Rightarrow ? = \dfrac{133}{72}$

7. Ans. B.

$\sqrt{?}\%$ of 160 = 64 ÷ 2

$\Rightarrow \dfrac{160 \times \sqrt{?}}{100} = 32$

$\Rightarrow \sqrt{?} = \dfrac{32 \times 100}{160}$

$\Rightarrow \sqrt{?} = 20$

$\Rightarrow ? = 400$

8. Ans. B.

(192 % of 175) – (306 ÷ 18) =? – 17 × 34 + 11²

$\Rightarrow \dfrac{192}{100} \times 175 - \dfrac{306}{18}$ =? – 578 + 121

$\Rightarrow$ 336 – 17 + 578 – 121 =?

$\Rightarrow ? = 776$

9. Ans. C.

Income of company A in the years 2008, 2009 and 2010 are Rs. 1104 lakh, 1104 × 1.25 = Rs. 1380 lakh and 1380 × 1.25 = Rs. 1725 lakh respectively.

Profit = $\dfrac{\text{Income} \times \text{profit percent}}{100 + \text{profit percent}}$

Profit in 2009 = $\dfrac{1380 \times 20}{120}$ = Rs. 230 lakh

Profit in 2010 = $\dfrac{1725 \times 15}{115}$ = Rs. 225 lakh

Hence, the total profit made by company A in the year 2009 and 2010 together = 230 + 225 = Rs. 455 lakh

10. Ans. D.

$\dfrac{\text{Expenditure}}{100} = \dfrac{\text{Income}}{100 + \text{profit percent}} = \dfrac{\text{Profit}}{\text{Profit percent}}$

$\Rightarrow \dfrac{280}{100} = \dfrac{\text{Income}}{135} = \dfrac{\text{Profit}}{35}$

$\Rightarrow$ Income = Rs. 378 lakh

$\Rightarrow$ Profit = Rs. 98 lakh

∴ Sum total of income and profit = 378 + 98 = Rs. 476 lakhs

11. Ans. D.

Income and expenditure is not given, therefore from profit percentage, profit cannot be determined.

12. Ans. B.

Income of both the companies A and B were same.

We know, ratio of expenditure = ratio of $\dfrac{\text{Income}}{100 + \text{Profit percent}}$

Hence, required ratio = $\dfrac{1}{100 + 40} : \dfrac{1}{100 + 55}$ = 155 : 140 = 31 : 28

13. Ans. A.

We know, ratio of expenditure = ratio of $\dfrac{\text{Income}}{100 + \text{Profit percent}}$

Ratio of expenditure of A and B = $\dfrac{7}{140} : \dfrac{15}{125}$ = 5 : 12

Hence, required profit = Profit of company A + Profit of company B = $\dfrac{5}{17} \times 697 \times \dfrac{40}{100} + \dfrac{12}{17} \times 697 \times \dfrac{25}{100}$ = 205 lakhs

14. Ans. C.
Pattern of the series is:
$59 + 1^2 = 60$
$60 + 2^2 = 64$
$64 + 3^2 = 73$
$73 + 4^2 = \mathbf{89}$
$89 + 5^2 = 114$
Hence, the answer is option C.

15. Ans. E.
Pattern of the series is:
$(256 \div 2) + 32 = 160$

$(160 \div 2) + 28 = 108$
$(108 \div 2) + 24 = 78$
$(78 \div 2) + 20 = \mathbf{59}$
$(59 \div 2) + 16 = 45.5$
$(45.5 \div 2) + 12 = 34.75$
Hence, option E is correct.