

Section : **Quantitative Aptitude**

Q.1 There are 3 groups of persons – male, female and children. There are 20 males and the number of females and children taken together is 4 more than that of the males. The average weight of males is 54 kg, that of females is 49 kg and that of children is 30 kg. If the average weight of the whole group is 48.25 kg, then what is the difference between the number of females and the number of children?

- Ans**
- 1. 17
 - 2. 14
 - 3. 10
 - 4. 7

Question ID : **6549789407**
Status : **Not Answered**
Chosen Option : --

Q.2 Nalini's younger brother is 12 years old. If the ratio of the age of Nalini to that of her brother is 7 : 6, then what will be ratio in their ages 6 years hence?

- Ans**
- 1. 13 : 12
 - 2. 10 : 6
 - 3. 10 : 9
 - 4. 17 : 15

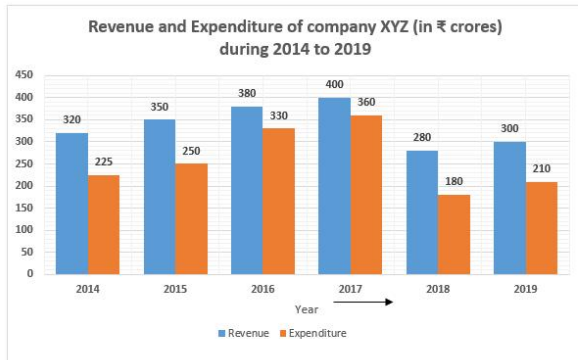
Question ID : **6549789411**
Status : **Answered**
Chosen Option : **3**

Q.3 Sunil can row a boat 20 km upstream in 1 hour 15 minutes. If the speed of the current of the river is 2 km/h, then how much time will he take to row the boat 30 km downstream?

- Ans**
- 1. 1 h 45 m
 - 2. 1 h 10 m
 - 3. 1 h 30 m
 - 4. 1 h 20 m

Question ID : **6549789405**
Status : **Answered**
Chosen Option : **3**

Q.4 Study the given graph and answer the question that follows.



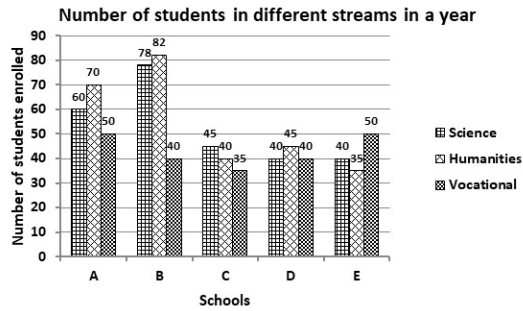
By what percentage is the average expenditure of the company in 2014, 2016 and 2018 less than the revenue in 2017?

- Ans**
- 1. 63.27%
 - 2. 37.5%
 - 3. 38.75%
 - 4. 56.25%

Question ID : **6549787810**
Status : **Answered**
Chosen Option : **3**

Q.5 The number of students enrolled in different streams at Senior Secondary level in five schools is shown in the bar graph.

What is the ratio of the number of students of science stream of schools A, B and D taken together to the number of students of vocational stream in schools B, D and E taken together?



- Ans**
- 1. 178 : 125
 - 2. 7 : 5
 - 3. 89 : 65
 - 4. 94 : 65

Question ID : **6549789428**
 Status : **Answered**
 Chosen Option : **3**

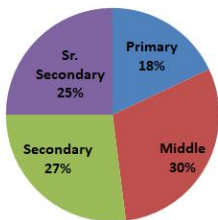
Q.6 Simplify the given expression.

$$\left(x - \frac{2}{x}\right)^3 - \left(x + \frac{2}{x}\right)^3$$

- Ans**
- 1. $2\left(x - \frac{4}{x^3}\right)$
 - 2. $4\left(3x - \frac{4}{x^3}\right)$
 - 3. $-4\left(3x + \frac{4}{x^3}\right)$
 - 4. $-4\left(x + \frac{4}{x^3}\right)$

Question ID : **6549789417**
 Status : **Answered**
 Chosen Option : **4**

Q.7 Students of Primary, Middle, Secondary and Sr. Secondary classes collected donation for a Relief Fund as shown in the given pie chart. If the donation collected from Middle classes was ₹6,750, then how much more money was collected by Middle classes as compared to Secondary classes?



- Ans**
- 1. ₹675
 - 2. ₹1,125
 - 3. ₹6,075
 - 4. ₹2,025

Question ID : **6549788416**
 Status : **Answered**
 Chosen Option : **2**

Q.8 If $x + \frac{1}{15x} = 3$, then the value of $9x^3 + \frac{1}{375x^3}$ will be:

- Ans**
- 1. 237.6
 - 2. 367.2
 - 3. 273.6
 - 4. 376.2

Question ID : **6549786994**
 Status : **Not Answered**
 Chosen Option : --

Q.9 What is the sum of all the possible values of k for which a seven-digit number 23k567k is divisible by 3?

- Ans**
- 1. 109
 - 2. 15
 - 3. 16
 - 4. 3

Question ID : **6549789420**
 Status : **Answered**
 Chosen Option : **3**

Q.10 Evaluate the following expression.

$$\frac{3(\cot^2 46^\circ - \sec^2 44^\circ)}{2(\sin^2 28^\circ + \sin^2 62^\circ)} + \frac{2\cos^2 60^\circ \tan^2 33^\circ \tan^2 57^\circ}{\sec^2(90^\circ - \theta) - \cot^2 \theta}$$

- Ans
- 1. 2
 - 2. -1
 - 3. 1
 - 4. -2

Question ID : 6549789423
 Status : Answered
 Chosen Option : 1

Q.11 The simple interest on a sum of ₹12,000 at the end of 5 years is ₹6,000. What would have been the compound interest on the same sum at the same rate for 3 years when compounded annually?

- Ans
- 1. ₹3,972
 - 2. ₹3,970
 - 3. ₹2,520
 - 4. ₹3,600

Question ID : 6549789412
 Status : Answered
 Chosen Option : 1

Q.12 In ΔABC , points D and E are on AB and AC, respectively, such that DE is parallel to BC. If AD = 3 cm, BD = 6 cm and AE = 2 cm, then find the length of CE.

- Ans
- 1. 6 cm
 - 2. 8 cm
 - 3. 16 cm
 - 4. 4 cm

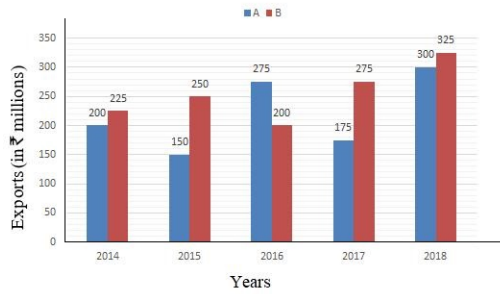
Question ID : 6549789415
 Status : Answered
 Chosen Option : 1

Q.13 If $\tan \theta = \frac{4}{3}$, then the value of $\frac{9 \sin \theta + 12 \cos \theta}{27 \cos \theta - 20 \sin \theta}$ will be equal to:

- Ans
- 1. 72
 - 2. 36
 - 3. 100
 - 4. 18

Question ID : 6549786998
 Status : Answered
 Chosen Option : 1

Q.14 Study the given bar graph and answer the question that follows.
The bar graph shows the exports of cars of types A and B (in ₹ million).



What is the ratio of the total exports of cars of type A in 2016 and 2018 to the total exports of cars of type B in 2015 and 2017?

- Ans**
- 1. 23 : 21
 - 2. 21 : 23
 - 3. 18 : 23
 - 4. 15 : 29

Question ID : 6549787001
Status : Answered
Chosen Option : 1

Q.15 For $\theta : 0^\circ < \theta < 90^\circ$

$3 \sec \theta + 4 \cos \theta = 4\sqrt{3}$, find the value of $(1 - \sin \theta + \cos \theta)$.

- Ans**
- 1. $\frac{1 - \sqrt{3}}{2}$
 - 2. $\frac{1 + 2\sqrt{3}}{2}$
 - 3. $\frac{1 + \sqrt{3}}{2}$
 - 4. $\frac{1 - 2\sqrt{3}}{2}$

Question ID : 6549787000
Status : Answered
Chosen Option : 3

Q.16 After allowing a discount of 15% on the marked price of an article, it was sold for ₹425. Had the discount not been given, the profit would have been 25%. What was the cost price (in ₹) of the article?

- Ans**
- 1. 500
 - 2. 450
 - 3. 325
 - 4. 400

Question ID : 6549786984
Status : Answered
Chosen Option : 4

Q.17 An article is sold at a certain price. If it is sold at $33\frac{1}{3}\%$ of this price, there is a loss of $33\frac{1}{3}\%$. What is the percentage profit or percentage loss when it is sold at 40% of the original selling price?

- Ans**
- 1. Profit 15%
 - 2. Loss 20%
 - 3. Profit 18%
 - 4. Loss 12%

Question ID : **6549786986**
Status : **Answered**
Chosen Option : **2**

Q.18 A person saves 25% of his income. If his income increases by 20% and his saving remains the same, then what will be the increased percentage of his expenditure?

- Ans**
- 1. 30
 - 2. 20
 - 3. 26
 - 4. $26\frac{2}{3}$

Question ID : **6549789409**
Status : **Answered**
Chosen Option : **4**

Q.19 ABC is a triangle inscribed in a circle and $\angle ACB$ is equal to 35° . P is a point on the circle on the side AB, opposite to C. What is the value of $\angle APB$ in degrees?

- Ans**
- 1. 70
 - 2. 175
 - 3. 145
 - 4. 72.5

Question ID : **6549789413**
Status : **Answered**
Chosen Option : **4**

Q.20 A solid metallic sphere of radius 10 cm is melted and recast into spheres of radius 2 cm each. How many such spheres can be made?

- Ans**
- 1. 64
 - 2. 125
 - 3. 216
 - 4. 100

Question ID : **6549786982**
Status : **Answered**
Chosen Option : **2**

Q.21 10 men or 15 women can complete a work in 30 days. In how many days can 15 men and 27 women complete the work?

Ans

1. $6\frac{1}{11}$

2. $11\frac{1}{11}$

3. $5\frac{1}{11}$

4. $9\frac{1}{11}$

Question ID : 6549786980
 Status : Answered
 Chosen Option : 4

Q.22 $16\frac{1}{4} \div [2\frac{1}{6} + \{4\frac{1}{3} - (2\frac{1}{2} + \frac{3}{4})\}]$ is equal to:

Ans

1. 3

2. 5

3. 4

4. 6

Question ID : 6549786997
 Status : Answered
 Chosen Option : 2

Q.23 Let O be the centre of a circle and AC be the diameter. BD is a chord intersecting AC at E . AD and AB are joined. If $\angle BOC = 40^\circ$ and $\angle AOD = 120^\circ$, then $\angle BEC$ is equal to:

Ans

1. 90°

2. 70°

3. 80°

4. 55°

Question ID : 6549786990
 Status : Answered
 Chosen Option : 3

Q.24 In triangle ABC , AD is the internal bisector of $\angle A$ meeting BC at D . If $BD = 3.6$ cm and $BC = 8$ cm, then the ratio of AB to AC will be:

Ans

1. 13 : 7

2. 9 : 11

3. 11 : 9

4. 7 : 13

Question ID : 6549786992
 Status : Answered
 Chosen Option : 2

Q.25 If $x^6 - 6\sqrt{6}y^6 = (x^2 + Ay^2)(x^4 + Bx^2y^2 + Cy^4)$, then what will be the value of $(A^2 - B^2 + C^2)$?

- Ans**
- 1. 27
 - 2. 36
 - 3. 18
 - 4. 42

Question ID : **6549786995**

Status : **Not Answered**

Chosen Option : --