# G.S.C.E

**Chapter Covered Average and Fractions & Decimals**
**(50 Questions with Options, Answers and Explanations)**

Q1

The average age of a family of 6 members is 54 years. If one member is added, then the average increases by one year. Find the age of the new member.

(a) 59 years (b) 65 years
(c) 70 years (d) 61 years
(e) 67 years

Q2

The arithmetic mean of the numbers 2, 3, 11, 15, 8, 10, 9, 7, 16, and $x$ is 100. Find the value of $x$.

(a) 19 (b) 20
(c) 18 (d) 11
(e) 10

Q3

The average weight of 45 students in a class is 98 kg. The average weight of 30 students is 89. What is the average weight of the remaining 15 students?

(a) 116 kg (b) 120 kg
(c) 20 kg (d) 11 kg
(e) None of these

Q4

There are three sections of class $x$ consisting of 55, 60 and 45 students respectively. The average marks scored in an examination by section A is 50, B is 55 and C is 60. The average marks of all the sections are:

(a) 54.68 (b) 54
(c) 55.68 (d) 56.68
(e) 57

Q5

Eight persons went for a picnic to a zoo. Their total weight on the elephant safari was 540 kg. When the weight of the man riding the elephant safari was added, the total weight became 621 kg. Find the average in the increase of the weight.

(a) 10 kg (b) 19 kg
(c) 70 kg (d) 9 kg
(e) 81 kg

Q6

Find the average of the first 20 natural numbers.

(a) 11.5 (b) 10.5
(c) 20.5 (d) 9.5
(e) 13.5

Q7

The average of 60 numbers is 40. If two numbers, 69 and 70 are added, then the average of all the numbers become:

(a) 38.95 (b) 41.95
(c) 40.95 (d) 41
(e) 42.95

Q8

Twenty boys are to be divided into two sections A and B with 12 and 8 boys respectively. The average height of the boys of Section A is 153 cm and that of all 20 boys is 163 cm. What is the average height of boys of Section B?

(a) 341.52 cm (b) 178 cm
(c) 340 cm (d) 342 cm
(e) 179 cm

Q9

The average of 8 numbers is 20. If one of the numbers is 18 and if it is replaced by 30, then the average becomes:

(a) 21 (b) 20.50
(c) 12 (d) 19
(e) 21.50

Q10

The average of three numbers is 50. The first number is twice the second and the second one is thrice the third number. The difference between the largest and the smallest numbers is:

(a) 55 (b) 75
(c) 76 (d) 85
(e) 86

Q11

The average weight of 8 persons increases by 2.5 kg when a new person replaces one of the persons weighing 65 kg. What might be the weight of the new person?

(a) 76 kg (b) 85 kg
(c) 76.5 kg (d) 80 kg
(e) Data inadequate

Q12

The average age of 45 persons is decreased by $\frac{1}{9}$ year when one of them age 60 years is replaced by a new person. What will be the age of the new person?

(a) 56 years (b) 57 years
(c) 52 years (d) 65 years
(e) 55 years

Q13

The average of 5 consecutive integers starting from $m$ is $n$. What is the average of 6 consecutive integers starting from $(m+2)$?

(a) $\frac{2n+5}{2}$ (b) $n+3$
(c) $n+2$ (d) $\frac{2n+9}{2}$
(e) None of these

Q14

The average weight of students in a class of 42 is 57 kg. If the weight of the teacher be is included, the average will be increased by 600 gm. Find the weight of the teacher.

(a) 81 kg (b) 82 kg
(c) 83 kg (d) 82.8 kg
(e) 84 kg

Q15

In an office, the average salary of 28 workers is Rs 2,500 per month. If the manager's salary is added, the average becomes Rs 3,200 per month. Find the salary of the manager.

(a) Rs 22,000 (b) Rs 2,200
(c) Rs 22,800 (d) Rs 8,000
(e) Rs 21,800

Q16

There are 6,000 books in a library. The average price of these books is Rs 150. If 170 new books are added, the average reduces to 145. Find the average price of the new books.

(a) Rs 146.50 (b) Rs 145.12
(c) Rs 149.86 (d) Rs 150
(e) Rs 140

Q17

The average salary of 7 members of Sharma family is Rs 7,000. The average salary of two male members is Rs 5,500. What is the average salary of the remaining members?

(a) Rs 8,200 (b) Rs 5,500
(c) Rs 7,600 (d) Rs 5,400
(e) Rs 7,500

Q18

The arithmetic mean of the scores of a group of students in a test was 62. The brightest 30% of the students secured a mean score of 90 and the dullest 20%, secured a mean score of 41. Find the mean score of remaining 50%.

(a) 53 (b) 53.60
(c) 52.60 (d) 51.60
(e) 50.60

Q19

The average age of a group of 16 persons is 25 years and 3 months. Two persons each age 34 years old left the group. What is the average age of the remaining persons?

(a) 23 years (b) 26 years
(c) 24 years (d) 20 years
(e) None of these

Q20

The average age of 23 boys and the class teacher is 17 years. If the teacher left the class, the average becomes 16. What is the age of the class teacher?

(a) 40 years (b) 31 years
(c) 38 years (d) 30 years
(e) 32 years

Q21

A batsman makes a score of 78 runs in the 19th inning and thus decreases the average score by 2. The average score after the 19th inning is ____.

(a) 118 (b) 122
(c) 156 (d) 114

Q22

The average score of batsman for 10 innings is 50. In his 11th innings, he scores 42. What is the approximate combined average of his 11 innings?

(a) 40 (b) 50
(c) 60 (d) 49

Q23

Eight consecutive numbers are given. If the average of the two numbers that appear in the middle is 6, then the sum of the eight given numbers is:

(a) 54 (b) 64
(c) 36 (d) 48

Q24

Average of the first five prime numbers is:

(a) 5.3 (b) 5.6

(c) 5 (d) 3.6

Q25

The average of four consecutive even numbers is 15. The second highest number is:

(a) 12 (b) 18

(c) 14 (d) 16

Q26

Which of the following does not lie between $\frac{3}{4}$ and $\frac{5}{4}$?

(a) $\frac{4}{5}$ (b) $\frac{6}{7}$

(c) $\frac{7}{13}$ (d) $\frac{17}{20}$

(e) $\frac{21}{20}$

Q27

Arrange these fractions in the ascending order: $\frac{8}{9}, \frac{2}{3}, \frac{3}{5}, \frac{7}{9}, \frac{9}{11}$

(a) $\frac{7}{9}, \frac{9}{11}, \frac{8}{9}, \frac{2}{3}, \frac{3}{5}$

(b) $\frac{3}{5}, \frac{2}{3}, \frac{7}{9}, \frac{9}{1}, \frac{8}{19}$

(c) $\frac{9}{11}, \frac{8}{9}, \frac{2}{3}, \frac{3}{5}, \frac{7}{9}$

(d) $\frac{2}{3}, \frac{3}{5}, \frac{7}{9}, \frac{8}{9}, \frac{9}{11}$

(e) $\frac{8}{9}, \frac{2}{3}, \frac{3}{5}, \frac{7}{9}, \frac{9}{11}$

Q28

Find the value of $\left(0.\overline{3}+0.\overline{4}+0.\overline{7}+0.\overline{8}+0.0\overline{4}\right)$.

(a) $\frac{81}{33}$ (b) $\frac{82}{33}$

(c) $\frac{82}{99}$ (d) $0.\overline{5}$

(e) $0.\overline{7}$

Q29

Evaluate: $\frac{(0.47)^3-(0.2)^3}{(0.47)^2+0.188+(0.2)^2}$

(a) 0.213 (b) 0.123
(c) 0.47 (d) 21.3
(e) 0.0213

Q30

Which of the following are in the descending order?

(a) $\frac{3}{16},\frac{5}{32},\frac{1}{8},\frac{7}{64},\frac{9}{128}$

(b) $\frac{9}{128},\frac{7}{64},\frac{1}{8},\frac{5}{32},\frac{3}{16}$

(c) $\frac{9}{128},\frac{7}{64},\frac{1}{8},\frac{5}{32},\frac{3}{16}$

(d) $\frac{1}{8},\frac{5}{32},\frac{3}{16},\frac{9}{128},\frac{7}{64}$

(e) $\frac{3}{16},\frac{1}{8},\frac{5}{32},\frac{9}{128},\frac{7}{64}$

Q31

What is the sum of first 17 terms of the series
$\frac{1}{3\times4}+\frac{1}{4\times5}+\frac{1}{5\times6}+\frac{1}{6\times7}+\ldots\ldots\ldots+\frac{1}{1\ \times31\ \ 4}$

(a) 0.25 (b) 0.21
(c) 0.26 (d) 0.81
(e) 0.19

Q32

Express 0.454545 …… in the form $\frac{p}{q}$.

(a) $\frac{11}{5}$ (b) $\frac{10}{6}$
(c) $\frac{45}{100}$ (d) $\frac{5}{11}$
(e) $\frac{4}{5}$

Q33

Evaluate:

$$0.25\left[\left(0.15+\frac{1}{0.35+\frac{2}{5}}\right)-\left(3.5+\frac{1}{1.5+\frac{4}{5}}\right)\right]$$

(a) 6.12
(b) 61.2
(c) –0.612
(d) 0.612
(e) –0.0612

Q34

A student is asked to multiply a number by $\frac{9}{19}$. But he divides the number by $\frac{9}{19}$ and gets 560 more than the original result. What is the number?

(a) 342 (b) 243
(c) 81 (d) 280
(e) 360

Q35

Evaluate: $1.\bar{4}\times 0.\overline{33}\div 0.\bar{1}$.

(a) $4.\overline{62}$ (b) $4.\overline{33}$
(c) $4.\overline{63}$ (d) $5.\overline{33}$
(e) $4.\overline{82}$

Q36

If $\frac{5}{2} * \frac{2}{3} * \left(\frac{8}{5} * \frac{1}{3}\right) = \frac{51}{10}$, then find *

(a) – (b) +
(c) × (d) ÷
(e) Cannot be determined

Q37

A number whose one-fourth of which exceeds its one-fifth by 160 is:

(a) 1,800 (b) 2,400
(c) 3,200 (d) 1,600
(e) 2,500

Q38

A train started from Agra at 5:00 a.m. At the next station, $\frac{1}{4}$ of passengers got down and 48 got in. At the third station, $\frac{1}{3}$ of the total passengers present in train got down and 28 got in. Now the totally 332 passengers in the train. What was the total number of passengers present in the begin?

(a) 672 (b) 544
(c) 454 (d) 445
(e) 540

Q39

Simplify:
$$\frac{8.96\times8.96\times8.96-4.89\times4.89\times4.89}{8.96\times8.96+8.96\times4.89+4.89\times4.89}$$

(a) 40.7 (b) 0.407
(c) 4.07 (d) 0.0407
(e) 407

Q40

Simplify: $\frac{(0.078+0.871)^2-(0.078-0.871)^2}{0.078\times0.871}$

(a) 4 (b) 0.25
(c) 0.006084 (d) 0.949
(e) 0.793

Q41

$$\frac{(24\times16)-(736\div23)}{(42\times17)\div102}=x$$

(a) 51 (b) 51.28
(c) 50.28 (d) 53
(e) 54

Q42

$$\frac{\left[(2.5)^2+18+(3.6)^2\right]-\left[3.7\times2\frac{7}{11}\times22\right]}{(2.5)^2+(3.6)^2}=x$$

(a) 1.82 (b) 0.82
(c) 12.82 (d) 11.82
(e) 9.82

Q43

$$\frac{(18.99)^2-(16.66)^2}{35.65\times 2.33}=x$$

(a) 0 (b) 1
(c) 2 (d) 0.1
(e) 4

Q44

$19+10\div 2\times 6-7+5\times 2\div 1$
(a) 50 (b) 52
(c) 40 (d) 47
(e) 63

Q45

$57+45\div 5-10\times 15$
(a) −84 (b) 84
(c) 72 (d) 66
(e) 88

Q46

$(2)^2+(3)^2\div 9\times 12+(4)^2$
(a) 31 (b) 30
(c) 23 (d) 32
(e) 42

Q47

$25\div 5+(5\times 3)-18+2\times 4$
(a) 15 (b) 9
(c) 4 (d) 8
(e) 10

Q48

$8^3-8^2+28\div 7$
(a) 452
(b) 450
(c) 442
(d) 462
(e) 426

Q49

$10\times 11-78\div(13\times 6)+9\times 11+3$
(a) 222 (b) 210
(c) 212 (d) 211
(e) 200

Q50

$(125 \div 25) + 30 - 40 \times 10$

(a) 365 (b) −365

(c) 380 (d) 375

(e) 340