

GSA (preparing for GSS 26)

Average

Q 1# The average temperature during a summer week is 29°C . If the temperature for first four days is 30°C , what is the average for the last three days?

Sol:

o Average temperature of a week

$$29 \times 7 = 203 \quad \text{sum of the temperature}$$

o Sum of the first four days temperature

$$30 \times 4 = 120$$

o Subtraction

$$\frac{\text{week temp } 203}{4 \text{ days } 120} = \frac{\text{sum of temperatures}}{\text{no of temp.}} = 83$$

o Finding the average for the last three days

$$\frac{83}{3} = 27.5^{\circ}\text{C}$$

Therefore, the average temperature for the last three days will be 27.5°C .

Q 2# A school has three grades 25, 30 and 35 students respectively. The average height of students in the first grade is 120 cm, the average height of students in the second grade is 130 cm, the average height of students in the third grade is 140 cm. What is the average height

of all students in the school?

Sol:

o Sum of heights of grade one
 $120 \times 25 = 3000$

o Sum of heights of second grade
 $130 \times 30 = 3900$

o Sum of heights of third grade
 $140 \times 35 = 4900$

o Sum of all grades heights
 $3000 + 3900 + 4900 = 11800$

o Sum of all the students
 $25 + 30 + 35 = 90$

o Formula application so as to find the average height of all the students

$$\frac{11800}{90} = 131.111 \text{ cm}$$

$\frac{\text{Sum of value}}{\text{Divide by no of value}}$

Therefore, the average height of all students is equal to 131.111 cm

Linear equation

Q no 1# Find the value of X if the equation follows $10x - 12 = 28$.

Sol:

o $10x - 12 = 28 + 12$

$10x = 40$

$x = 4$

Therefore, the value of x is 4

Q No # 2 $3x + 11 = x + 19$, find the value of x .

Sol:

$$3x + 11 = x + 19$$

$$3x - x = 19 - 11$$

$$2x = 8$$

$$x = 4$$

Thus, the value of x is equal to 4

Q No # 3 Solve the equation and find the value of x .

Sol:

$$\frac{2x+7}{8} = \frac{x-3}{5}$$

$$5(2x+7) = 8(x-3)$$

$$10x + 35 = 8x - 24$$

$$10x + 8x = 35 - 24$$

$$18x = 11$$

Q No # 4 $\frac{4x+5}{7} = \frac{x-}{8}$

Sol:

$$8(4x+5) = 7(x-)$$

$$32x + 40 = 7x - 7$$

Q

$$36x + 40 = 7x - 7$$

$$36x + 7x = 40 - 7$$

$$43x = 33$$

$$x = \frac{33}{43}$$

$$25 - 21 = x - x$$

$$x = 10$$

Q NO 5#

$$5(w-2) + 7 = 3(18-4w)$$

Sol:

$$5w - 10 + 7 = 54 - 12w$$

$$5w - 3 = 54 - 12w$$

$$(5w + 12w) = (54 + 3)$$

$$17w = 57$$

$$w = \frac{57}{17}$$

Q NO 6# A number subtracted from 15 is equal to 4 times the number. Find the number.

Sol: Let a number be x

$$15 - x = 4x$$

$$15 = 5x$$

Thus, the a number is $x = 3$