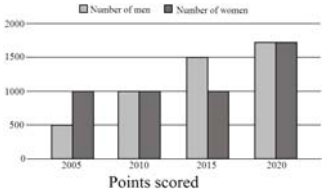
Exam Paper

Standard: 8th Subject: Mathematics

Q1. Below is the data of the number of men and women in a village for different years. Now based on this data answer the following MCQs with the correct option. **1 Mark**



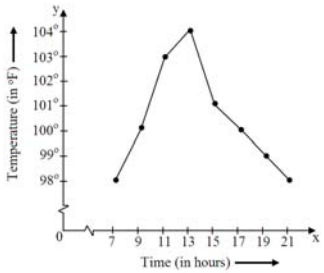
How many men were there in the village in 2010?

A 500 **B** 1500 **C** 1000 **D** 2000

Q2. Which of the following statements is true?

A Natural numbers are commutative for subtraction.
B Whole numbers are commutative for subtraction.
C Integers are commutative for subtraction.
D Rational numbers are not commutative for subtraction.

Q3. Observe the following temperature time graph and answer the related questions:



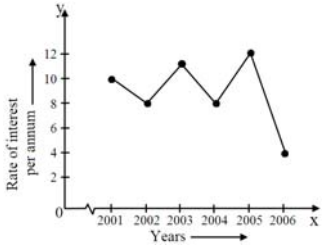
103ºF temperature is at time.

A 11 hours **B** 13 hours **C** 15 hours **D** 21 hours

Q4. Which of the following points lies on y-axis?

A (-4, 0) **B** (4 ,0) **C** (0, -4) **D** (-4, 4)

Q5. Read the graph and answer the related questions:



Rise in interest from 2004 to 2005 was.

A 2% **B** 4% **C** 6% **D** 8%

Q6. If a and b are two rational numbers, then: **1 Mark**

A $\frac{a+b}{2} < a$
B $\frac{a+b}{2} < b$
C $\frac{a+b}{2} = a$
D $\frac{a+b}{2} > b$

Q7. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following: **1 Mark**

Assertion (A): -a × b = b × a is called commutative law for multiplication

Reason (R): Rational numbers are commutative under addition and multiplication

A Both A and R are true and R is the correct explanation of A
B Both A and R are true but R is not the correct explanation of A
C A is true but R is false
D A is false but R is true

Q8. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following: **1 Mark**

Assertion (A): Rational numbers are commutative for multiplication

Reason (R): Rational numbers are commutative under addition and multiplication

A Both A and R are true and R is the correct explanation of A

B Both A and R are true but R is not the correct explanation of A

C A is true but R is false

D A is false but R is true

Q9. A _____ is the representation of data by using graphical symbols such as lines, bars, pie slices, histogram etc. **1 Mark**

A flow chart **B** diagram **C** equation **D** graph

Q10. Which is a two dimensional graph? **1 Mark**

A pie **B** bar **C** histogram **D** frequency curve

Q11. Tick (✓) the correct answer the following:

The product of two rational numbers is $\frac{-28}{81}$. If one of the numbers is $\frac{14}{27}$ then the other one is:

A $\frac{-2}{3}$ **B** $\frac{2}{3}$ **C** $\frac{3}{2}$ **D** $\frac{-3}{2}$

Q12. Find the product of the $\frac{4}{5}$ and the reciprocal of $\frac{5}{8}$.

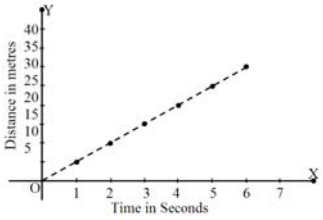
A $\frac{32}{24}$ **B** $\frac{31}{25}$ **C** $\frac{32}{25}$ **D** $\frac{22}{25}$

Q13. Mark (✓) against the correct answer of the following:

Reciprocal of $\frac{-7}{9}$ is:

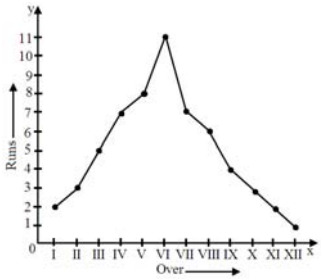
A $\frac{9}{7}$ **B** $\frac{-9}{7}$ **C** $\frac{7}{9}$ **D** None of these.

Q14. Find the distance covered in 7 seconds.



A 30m **B** 25m **C** 35m **D** 20m

Q15. Observe the following runs-over graph and answer the related questions:



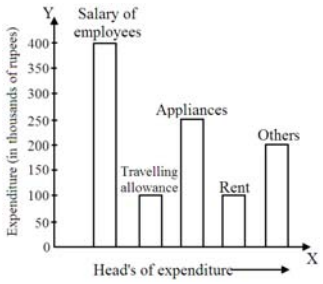
What is the sum of runs scored in I and XII overs?

A 1 **B** 2 **C** 3 **D** 4

Q16. What should be subtracted from $-\frac{5}{4}$ to get -1? **1 Mark**

A $-\frac{1}{4}$ **B** $\frac{1}{4}$ **C** 1 **D** $-\frac{3}{4}$

Q17. Observe the following bar graph and answer the related questions: **1 Mark**



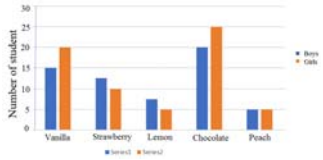
On which head/ heads, is the expenditure minimum?

A Travelling allowance/ rent. **B** Appliances.

C Salary of employees. **D** Others.

Q18. Refer the given graph and answer the following question: **1 Mark**

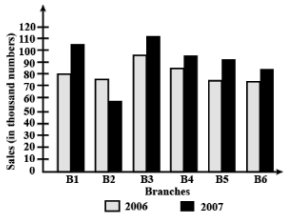
A survey was conducted in a class to see how many girls and boys like a particular ice cream flavour. How many more girls like the chocolate flavour than the boys?



A 0 **B** 15 **C** 10 **D** 5

Q19. The bar-graph provided gives the sales of books (in thousands) from six branches of a publishing company during two consecutive years 2006 and 2007. Answer the question based on this bar-graph.

What is the ratio of the total sales of branch B_2 for both years to the total sales of branch B_4 for both years?



A 2:3 **B** 3:5 **C** 13:18 **D** 7:9

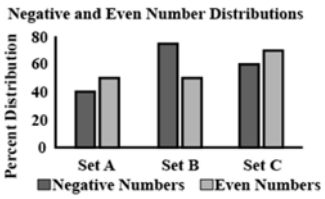
Q20. Find the additive inverse of $\frac{11}{7}$?

A $\frac{11}{7}$ **B** $-\frac{11}{7}$ **C** $\frac{7}{11}$ **D** $-\frac{7}{11}$

Q21. Which of the following is the reciprocal of a?

A a **B** a **C** $\frac{1}{a}$ **D** $-\frac{1}{a}$

Q22. How many sets had more even than negative numbers?



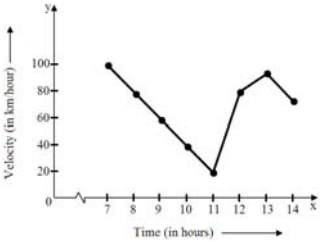
A 0 **B** 1 **C** 2 **D** 3

Q23. Zero (0) is: **1 Mark**

A The identity for addition of rational numbers. **B** The identity for subtraction of rational numbers.

C The identity for multiplication of rational numbers. **D** The identity for division of rational numbers.

Q24. Observe the following velocity-time graph and answer the related questions: **1 Mark**



At what time is the velocity maximum?

A 7 **B** 8 **C** 9 **D** 10

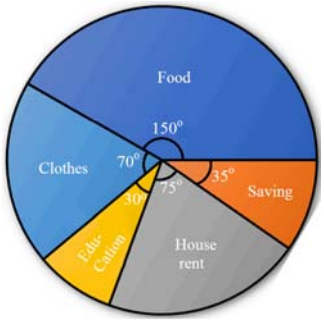
Q25. The point (0, 0) lies at: **1 Mark**

A X-axis **B** Y-axis **C** Origin **D** None of the above.

Q26. The multiplicative identity of rational numbers is: **1 Mark**

A 0 **B** 1 **C** 2 **D** -1

Q27. Observe the following circle-graph and answer the related questions: **1 Mark**



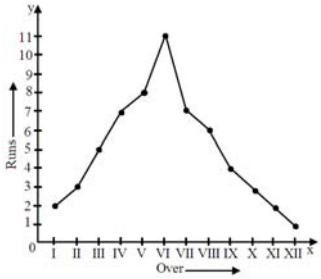
On which head is the expenditure maximum?

A Food **B** Clothes **C** House rent **D** Education

Q28. Rectangle bars touching each other in which graph _____.

A histogram **B** bar **C** pie **D** line

Q29. Observe the following runs-over graph and answer the related questions:



3 runs are scored in which overs?

A II and X **B** I and V **C** VII and VIII **D** X and XII

Q30. (O, Y) are the co-ordinates of a point lying on which of the following?

A Origin **B** Y-axis **C** X-axis **D** None of these.

Q31. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following:
Assertion (A): -a + b = b + a is called commutative law of addition
Reason (R): Rational numbers are commutative under addition and multiplication

A Both A and R are true and R is the correct explanation of A
B Both A and R are true but R is not the correct explanation of A
C A is true but R is false
D A is false but R is true

Q32. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following: **1 Mark**
Assertion (A): Natural numbers are associative for division
Reason (R): The associative property states that the sum or the product of three or more numbers does not change if they are grouped in a different way.

A Both A and R are true and R is the correct explanation of A
B Both A and R are true but R is not the correct explanation of A
C A is true but R is false
D A is false but R is true

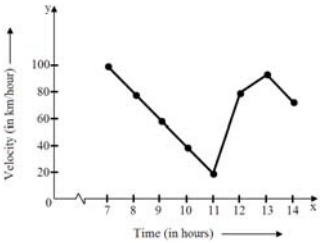
Q33. Tick (✓) the correct answer the following: **1 Mark**
What should be added to $\frac{-5}{7}$ to get $\frac{-2}{3}$?

A $\frac{-29}{21}$ **B** $\frac{29}{21}$ **C** $\frac{1}{21}$ **D** $\frac{-1}{21}$

Q34. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following: **1 Mark**
Assertion (A): Natural numbers are associative for addition
Reason (R): The associative property states that the sum or the product of three or more numbers does not change if they are grouped in a different way.

A Both A and R are true and R is the correct explanation of A
B Both A and R are true but R is not the correct explanation of A
C A is true but R is false
D A is false but R is true

Q35. Observe the following velocity-time graph and answer the related questions: **1 Mark**



At what times are the velocities equal?

A 8 and 12 **B** 9 and 11 **C** 7 and 12 **D** 11 and 13

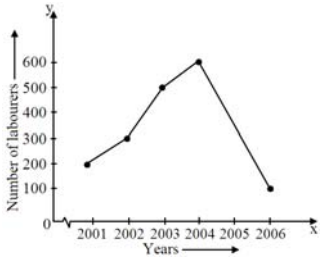
Q36. In a bar chart, the _____ are represented by the heights of the bars.

A variables **B** weights **C** frequencies **D** constant

Q37. Which of the following is the product of $\left(\frac{-7}{8}\right)$ and $\frac{4}{21}$?

A $\frac{-1}{6}$ **B** 12 **C** $\frac{-63}{16}$ **D** $\frac{-16}{147}$

Q38. Read the graph and answer the related questions:



Find the rise in the number of labourers from 2001 to 2004.

A 200 **B** 300 **C** 400 **D** 500

Q39. Use the distributivity of multiplication of rational numbers over their addition to simplify:
$\frac{3}{5} \times \left(\frac{35}{24} + \frac{10}{1}\right)$

Q40. $\left(\frac{-9}{4} \times \frac{5}{3}\right) + \left(\frac{13}{2} \times \frac{5}{6}\right)$ **2 Marks**

Q41. Simplify the following and write as a rational number of the form $\frac{p}{q}$: **2 Marks**
$\frac{3}{4} + \frac{5}{6} + \frac{-7}{8}$

Q42. By what number should we multiply $\frac{-1}{6}$ so that the product may be $\frac{-23}{9}$? **2 Marks**

Q43. The cost of $3\frac{1}{2}$ metres of cloth is $\text{Rs. } 166\frac{1}{4}$. What is the cost of one metre of cloth? **2 Marks**

Q44. Verify the following: **2 Marks**
$\frac{-5}{8} + \frac{-9}{13} = \frac{-9}{13} + \frac{-5}{8}$

Q45. Represent the following numbers on the number line. **2 Marks**

$2\frac{2}{5}$

Q46. $\left(\frac{13}{5} \times \frac{8}{3}\right) - \left(\frac{-5}{2} \times \frac{11}{3}\right)$ **3 Marks**

Q47. Verify the property x × (y + z) = x × y + x × z of rational numbers by taking. **3 Marks**

$x = \frac{-1}{2}, y = \frac{2}{3}, z = \frac{3}{4}$

Q48. Rita had Rs. 300. She spent $\frac{1}{3}$ of her money on notebooks and $\frac{1}{4}$ of the remainder on stationery items. How much money is left with her? **3 Marks**

Q49. Simplify: **3 Marks**

$\left(\frac{3}{2} \times \frac{1}{6}\right) + \left(\frac{5}{3} \times \frac{7}{2}\right) - \left(\frac{13}{8} \times \frac{4}{3}\right)$

Q50. Locate the points A (1, 2), B (4, 2) and C (1, 4) on a graph sheet taking suitable axes. Write the coordinates of the fourth point D in order to complete the rectangle ABCD.

Q51. Draw the temperature-time graph in each of the following cases:

1.

Time (in hours):	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00
Speed (in km/hr):	30	45	60	50	70	50	40	45

2.

Time (in hours):	8:00	10:00	12:00	14:00	16:00	18:00	20:00
Temperature (°F) in:	100	101	104	103	99	98	100