AMRITA VIDYALAYAM
HALF YEARLY EXAMINATION 2018 - '19

Class : VII

Marks : 80
Time   : 3 hrs

MATHEMATICS

GENERAL INSTRUCTIONS:
Questions 1 to 6 carry 1 mark each.
Questions 7 to 12 carry 2 marks each.
Questions 13 to 22 carry 3 marks each.
Questions 23 to 30 carry 4 marks each.

SECTION - A

1. Write a pair of integers whose difference gives a negative integer.
2. Which of the following is greater?

   a) $\frac{2}{3}$ and $\frac{1}{4}$ b) $\frac{3}{4}$ and $\frac{18}{12}$

3. A die is thrown, find the probability of getting a number greater than or equal to 3.
4 . Find the supplementary angle of 139^0.
5 . Use the sign of $>, <$ or $=$ in the blank to make the statements true.

   $-3 + 7 - (19)$ _____ $15 - 8 + (-9)$

6. Identify which of the following pairs of angles are complementary and which are supplementary.

   a) $60^0, 120^0$ b) $65^°, 25^0$

SECTION - B

7. Solve.

   a) $4 - \frac{3}{8}$ b) $\frac{4}{6} + \frac{2}{4} + \frac{1}{3}$

8. In the figure identify
   a) two linear pairs.   b) two pairs of vertically opposite angles.

9. In a class test containing 15 questions, 4 marks are given for every correct answer and (-2) marks are given for every incorrect answer.
   a) Rohit attempts all questions but only 9 of his answers are correct. What is his total score?
   b) One of his friends gets only 5 answers correct. What will be his score?
10. Rohan is dividing $1 \frac{3}{4}$ kg of sweets equally among his seven friends. How much does each friend receive?
11. Find the mean of first five prime numbers?
12. Suppose two lines are given. How many transversal can you draw for these lines? If a line is a transversal to three lines, how many points of intersections are there?

SECTION - C

13. Define mean, median and mode of the data.
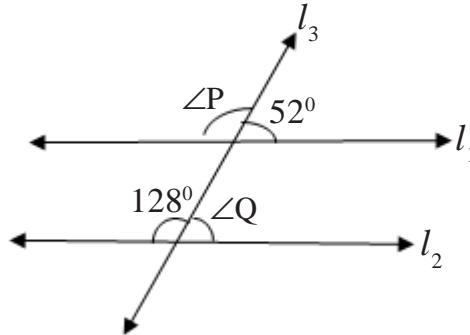
14. Find.

   a) $2\frac{1}{5} \div 1\frac{1}{5}$ 　　　　　　 b) $36 \div 0.2$ 　　　　　 c) $4\frac{3}{7} \times \frac{3}{5}$

15. In the following figure find the value of $\angle P$ and $\angle Q$.

16. In a magic square, the sum of the numbers in each row, in each column and along the diagonals is the the same. Is this a magic square?

$\frac{9}{13}$	$\frac{2}{13}$	$\frac{3}{13}$
$\frac{7}{13}$	$\frac{1}{13}$	$\frac{6}{13}$
$\frac{7}{13}$	$\frac{2}{13}$	$\frac{5}{13}$

17. A vehicle covers a distance of 43.2 km in 2.4 km litres of petrol. How much distance will it cover in one litre of petrol?

18. How would you find the average of your study hours for the whole week?

19. In the following figure if l is parallel to m, find the value of a and b.
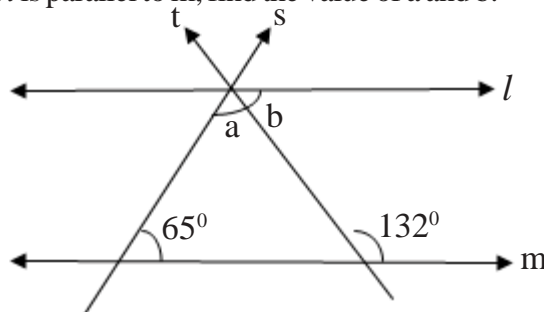
20. A bag is having 3 red balls and 2 yellow balls. If a ball is pulled out without looking at them, find the probability of getting a yellow ball.

21. Kavitha bought 5kg 300g apples and 4kg 250g mangoes. Ravi bought 3kg 800g oranges and 5kg 150g grapes. Who bought more fruits?

22. Starting from $(-1) \times 5$, write various products showing some pattern to show $(-1) \times (-1) = 1$.

SECTION - D

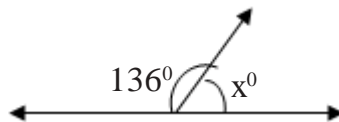23. Verify a - (-b) = a + b for the following values of a and b.

   a) a = 21, b = 18 　　　　　　　　　 b) a = 75, b = 84

24. Define range of the data. Find the range of the data.

   12, 4, 6, 7, 9, 14, 26, 36

25. Define linear pairs. Can two acute angles form a linear pair? In the figure find the value of x^0.

26. The runs scored in a cricket match by 11 players is as follows.
    6, 15, 120, 50, 100, 80, 10, 15, 8, 10, 15. Find the median and mode of this data. Are the two same?

27. Find the product using suitable properties.
    a) $57 \times (-68) + (-68) \times (-67)$ b) $-8 \times 60 \times (-125)$

28. Sale of Mathematics and Hindi books in the years 1999, 2000, 2001 and 2002 are given below.

Years	1999	2000	2001	2002
Maths	350	400	450	620
Hindi	500	525	600	650

Draw a double bar graph and answer the following questions.
a) In which year was the difference in the sale of the two subject books least?
b) Can you say that the demand for Mathematics book rose faster?

29. In a class of 40 students $\frac{1}{5}$ of the total number of students like to study English, $\frac{3}{5}$ of the total numbers like to study Maths and the remaining students like to study Science.
    a) How many students like to study English?
    b) How many students like to study Maths?
    c) What fraction of the total number of students would like to study Science?

30. Ajay had one sandwich for his lunch and his two other friends in his class forgot to get their lunch. Ajay decided to share his sandwich with them. How much part of the sandwich each of his friends get? What have you learnt by this behaviour of Ajay?