MISMO
Maarif Inter School Maths Olympiad

An initiative of

PAK-TURK MAARIF
INTERNATIONAL SCHOOLS & COLLEGES

MISMO 2022

Syllabus and Sample Questions - Grade 5

For Detailed Information Login to: www.mismo.pk

MISMO Syllabus– Grade 5

MISMO Content Assessment Percentage

Content Domains	Percentages
Numbers and Algebra	50%
Measurement and Geometry	30%
Data Handling	20%

Numbers and Algebra

Whole Numbers

- Demonstrate knowledge of place value (2-digit to 8-digit numbers);
- Represent whole numbers with words, diagrams, number lines, or symbols.
- Compare and order numbers.
- Add and subtract (up to 4-digit numbers), including computation in simple contextual problems.
- Multiply (up to 3-digit by 1-digit and 2-digit by 2-digit numbers) and divide (up to 3-digit by 1-digit and 2-digit numbers), including computation in simple contextual problems.
- Solve problems involving Highest Common Factor, Least Common Multiple, square numbers, rounding numbers (up to the nearest ten thousand), and making estimates.

Fractions and Decimals

- Represent fractions using words, numbers, or models.
- Compare and order fractions.
- Add, subtract, multiply and divide proper, improper fractions and mixed numbers and express the answer in its simplest form (if applicable).
- Solve real-world situations involving fractions.
- Demonstrate knowledge of decimal place value including representing decimals using words, numbers, or models.
- Compare, order, and round decimals.
- Convert a measurement from a smaller unit to a larger unit in decimal form, and vice versa.
- Solve word problems involving the 4 operations of decimals.

Percentage, Ratio, Rate and Average

- Solve problems involving percentages, including conversion between percentage and fractions or decimals.

- Find the ratio of two or three given quantities by expressing in its simplest form.
- Find equivalent ratios of a given ratio and find the missing term in a pair of equivalent ratios.
- Solve word problems involving ratios
- Express rate as an amount of quantity per unit of another quantity.
- Solve word problems involving rate, total amount and number of units.
- Find either average, total value or number of data, given the other two quantities.
- Solve word problems involving average.

Measurement and Geometry

Measurement

- Solve problems involving lengths (millimeters, centimeters, meters, kilometers) mass (gram and kilogram), and volume (milliliter and liter), identify appropriate types and sizes of units and read scales applying the unitary method.
- Solve problems involving time (minutes and hours), conversion of time, calculation of time interval using the 24-hour clock and in days weeks, months, and year.
- Solve problems involving perimeters and area of polygons.
- Find the area of figures made up of squares, rectangles and triangles.
- Find the volume of a cube and a cuboid in cm^3 and m^3.

Geometry

- Identify parallel and perpendicular lines.
- Use right angles to compare angles smaller or larger than a right angle.
- Identify straight and reflex angles, adjacent, complementary, and supplementary angles .
- Use properties to describe, compare, and create common two-dimensional shapes (circles, triangles, quadrilaterals, and other polygons).
- Identify and apply the property of sum of angles in a triangle to find an unknown angle.
- Identify and use the properties to find unknown angles involving parallelograms, rhombuses, and trapeziums.

Data handling

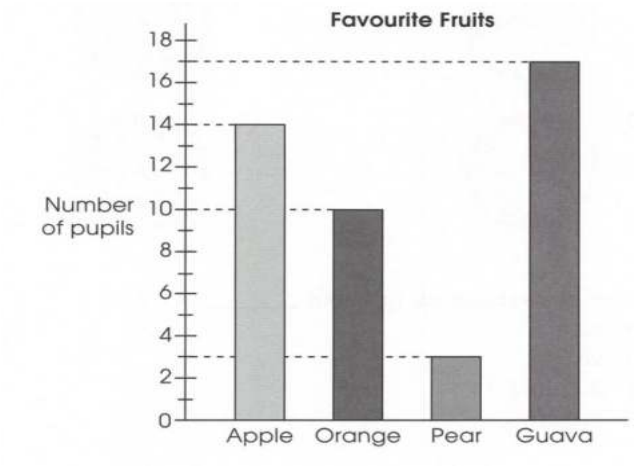
Reading, Interpreting and Representing Data

- Read and interpret data from tables, pictographs, bar graphs, line graphs, pie charts.
- Organize and represent data to answer questions.

MISMO 2022
SAMPLE QUESTIONS

Sample Questions MISMO 2022 – Grade 5

Look at the bar graph carefully and answer Question 1 and 12.
The bar graph shows the favourite fruits of the pupil in a class.



1. Which is the favourite fruit of most pupil?
   A. Apple
   B. Orange
   C. Pear
   D. Guava

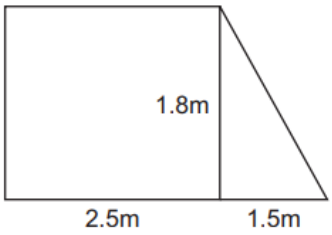
2. How many more pupil like guavas than pears?
   A. 14
   B. 17
   C. 3
   D. 20

3. Mina collects some data about the colour of babies' eyes.
   She enters her data in a tally chart.

Eye colour	Number
blue	𝍸 𝍸 |
green	|||
brown	𝍸 ||||
hazel	𝍸 |
grey	||

   How many more babies have hazel eyes than green eyes?
   A. 3
   B. 4
   C. 5
   D. 6

4. Ehsan digs a vegetable plot.



Calculate the area of the vegetable plot. Include the right units.

A. 5 . 85
B. 4 . 5
C. 2 . 7
D. 1 . 35

5. Sana was born on 25th February 2017.
Yasir is 9 months younger than her.
When was Yasir born?

A. 25th May 2016
B. 25th June 2016
C. 25th November 2017
D. 25th December 2017

6. Maha counts beetles with different numbers of spots.
She finds these beetles:3 spots, 5 spots, 7 spots, 3 spots,
3 spots, 5 spots, 3 spots, 5 spots, 3 spots, 7 spots, 3 spots
She enters the results in a frequency table. Complete her table:

Number of spots	Frequency
3 spots	3
7 spots	2

A. 6 and 5 spots
B. 5 and 4 spots
C. 4 and 5 spots
D. 6 and 3 spots

7. There are 548 boxes, each contain 72 packets of breakfast cereal.
   How many packets of cereal are there altogether?
   A. 39 456
   B. 49 456
   C. 58 466
   D. 38 467

8. Three children have an average of 43 stickers each.
   How many stickers do the 3 children have altogether?
   A. 14
   B. 43
   C. 86
   D. 129

9. Hina has a tank in the shape of a cube. The length of each edge is 10cm.
   She puts 1 litre of water into the tank. Find 1 litre in cubic centimetres?
   A. 1 cm^3
   B. 10 cm^3
   C. 100 cm^3
   D. 1000 cm^3

10. Mr. Salim earned $8 for every hour he worked.
    How many hours did Mr. Salim work if he earned $ 96?
    A. $9
    B. $10
    C. $11
    D. $12

11. Write 5 tens 4 tenths in decimals
    A. 0.54
    B. 5.40
    C. 50.4
    D. 504

12. Put brackets in the calculation to make it correct. 3 x 5 + 2 x 4 = 84
    A. (3 x 5) + 2 x 4 = 84
    B. 3 x (5 + 2) x 4 = 84
    C. 3 x 5 + (2 x 4) = 84
    D. 3 (x 5 + 2) x 4 = 84

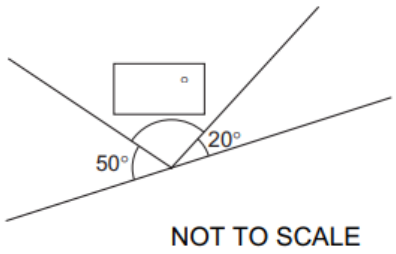
13. Waleed thinks of a number. He subtracts 4.5 and multiplies the result by 12. His answer is 32.4. What is his number?
    A. 6.4
    B. 7.2
    C. 8.6
    D. 72

14. A jacket costs $40. In the sale there is 25% off the jacket. What does the jacket cost now?
    A. $10
    B. $20
    C. $30
    D. $40

15. Mrs. Ali made 56 sandwiches for his son's birthday party. ¾ of the sandwiches were eaten. How many sandwiches were left?
    A. 14
    B. 28
    C. 42
    D. 56

16. A car uses 10 litres of petrol to travel 110 km. How far does it travel with 8 litres of petrol?
    A. 80
    B. 82
    C. 84
    D. 88

17. Calculate the value of the missing angle.



NOT TO SCALE

    A. 70°
    B. 90°
    C. 110°
    D. 170°

18. Find all the prime factors of 42.
    A. 2, 3, 7
    B. 1, 2, 3, 7
    C. 1, 2, 3, 7, 21
    D. 1, 2, 3, 6, 7, 14, 21, 42

19. Raza makes orange paint by mixing red and yellow.
    He uses red to yellow in the ratio 3 : 7. Raza needs 5 litres of orange paint.
    How much red and yellow paint does he need?
    A. 0.9 and 2.1 litres
    B. 1.2 and 2.8 litres
    C. 1.5 and 3.5 litres
    D. 1.8 and 4.2 litres

20. Sara watches snow falling. The snow starts falling at 10:45 am and stops falling at 12:15 pm.
    How long does the snowfall last?
    A. 30 minutes
    B. 45 minutes
    C. 60 minutes
    D. 90 minutes

21. Mrs. Taj sent a gift of $75 to each of 26 hospitals. How much money did she give in total?
    A. 1875
    B. 1950
    C. 2075
    D. 2050

22. At 11.30 am the temperature in Karachi was 27 °C. At 3.30 pm it had risen by exactly 10%.
    What was the temperature at 3.30 pm?
    A. 24.3°C
    B. 25.0°C
    C. 29.0°C
    D. 29.7°C

23. The total mass of 3 identical story books and a notebook is 800g.
    Each story book has a mass of 250 grams. What is the mass of the notebook?
    A. 50 grams
    B. 150 grams
    C. 200 grams
    D. 250 grams

24. Zain has 5 containers. Each container can hold 1.8 litre of water.
    How much water can the 5 containers hold altogether?
    A. 1.8 litre
    B. 3.6 litre
    C. 5.4 litre
    D. 9.0 litre

25. Bilal has $35.75. Junaid has $ 12.50 less than Bilal. Junaid receives $8.30 from his father.
    How much money does Junaid have in the end?
    A. 20.80
    B. 31.55
    C. 39.95
    D. 56.55

26. A florist has 234 flowers. 4/9 of the flowers are tulips. How many tulips does he have?
    A. 26
    B. 52
    C. 78
    D. 104