ORANGE™ GLOBAL OLYMPIAD

Mathematics Assessment 1

Curriculum & Sample Questions

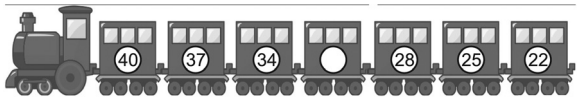
CURRICULUM

Numbers; Comparison; Addition; Subtraction; Measurement; Time and Calendar; Money; Shapes; Patterns; Data Handling; Logical Reasoning

Sample Questions

The actual question paper contatins 30 MCQs, out of which 25 questions are based on Subject knowledge and 5 are based on Logical Reasoning. The duration of the test paper is 60 minutes.

1. Which is the missing number?



(A) 2 tens 9 ones

(B) 31 ones

(C) 3 tens 2 ones

(D) 3 tens

2. Ram has 15 flowers, Sita has 24 flowers and Ramesh has 20 flowers. Who has the most number of flowers?

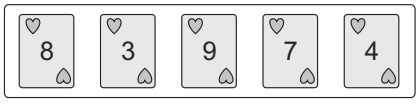
(A) Ram

(B) Sita

(C) Ramesh

(D) Ram and Sita both

3. Which two cards in the given box make a sum of 13?



(A) 9 and 4

(B) 3 and 7

(C) 8 and 4

(D) 9 and 3

4. Mother kept 15 glasses full of juices on a table. Children drank juices in 6 glasses. How many glasses with juices were left?

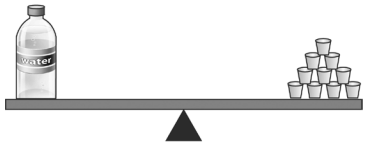
(A) 8

(B) 9

(C) 10

(D) 7

5. Ramu wants to know the weight of his water bottle. Please help him. Each stands for one unit.



(A) 4 units

(B) 7 units

(C) 9 units

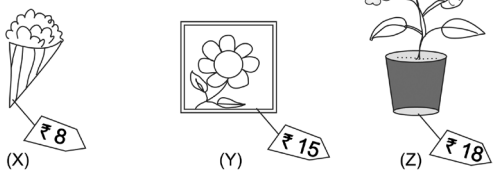
(D) 10 units

6. **If you went for a tour on Tuesday and came back on fourth day, then the day you came back is _____.**

(A) Thursday (B) Friday

(C) Saturday (D) Sunday

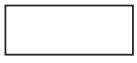
7. **Minni has ₹ 25. Which two things can she buy?**



(A) X and Y (B) Y and Z

(C) X and Z (D) All X, Y and Z

8. **Match each shape to its correct name.**

Column I	**Column II**
(a) 	(i) Square
(b) 	(ii) Triangle
(c) 	(iii) Rectangle
(d) 	(iv) Circle

(A) a–(iv), b–(ii), c–(iii), d–(i) (B) a–(iv), b–(ii), c–(i), d–(iii)

(C) a–(iv), b–(i), c–(iii), d–(ii) (D) a–(iv), b–(iii), c–(i), d–(ii)

9. **A1, B2, C3, D4, ?**

(A) D5 (B) E5

(C) E6 (D) G6

10. **How many A's are there in the given title?**

HAPPY CHILDREN'S DAY

(A) 2 (B) 3

(C) 4 (D) None of these

Answers																			
1.	B	**2.**	B	**3.**	A	**4.**	B	**5.**	D	**6.**	C	**7.**	A	**8.**	B	**9.**	B	**10.**	A

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Mathematics Assessment 2

Curriculum & Sample Questions

CURRICULUM

Numbers; Addition; Subtraction; Multiplication; Division; Measurement; Time and Calendar; Money; Shapes; Patterns; Data Handling; Logical Reasoning

Sample Questions

The actual question paper contatins 30 MCQs, out of which 25 questions are based on Subject knowledge and 5 are based on Logical Reasoning. The duration of the test paper is 60 minutes.

1. Which of the following is incorrect?

(A) 

– One hundred fifteen

(B) 

– One hundred seventy-five

(C) 

– One hundred forty-eight

(D) 

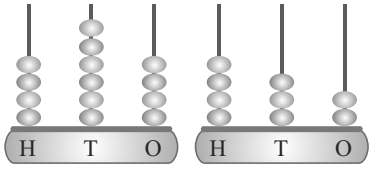
– One hundred sixty-three

2. When you add me to any number, there is no change in the number. Tell me who am I?

(A) 0 (B) 1

(C) 2 (D) No such number exists

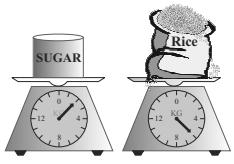
3. The difference between the numbers shown by two abacuses is _____.



(A) 33 ones (B) 3 ones 2 tens

(C) 3 tens 2 ones (D) 32 tens

4. The rice is heavier than the sugar by _____ kg.



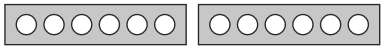
(A) 2 (B) 3

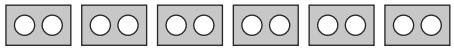
(C) 4 (D) 5

5. Which of the following represents 12 shared equally among 3 friends?

(A) 

(B) 

(C) 

(D) 

6. There are 5 boxes. Each box has 6 balls. How many balls are there altogether?

(A) 11 (B) 30

(C) 36 (D) 20

7. Helen started drawing a picture at 2:30 pm. She finished it at 3 pm. How much time did she take to complete it?

(A) 40 minutes (B) 1 hour

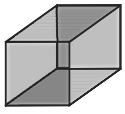
(C) Half an hour (D) None of these

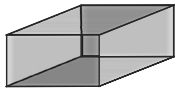
8. If a person has five ₹ 100 notes, two ₹ 50 notes and three ₹ 10 notes, then how much money is he carrying?

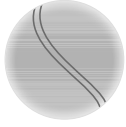
(A) ₹ 610 (B) ₹ 600

(C) ₹ 630 (D) ₹ 650

9. A figure which has no corner and no edge is _____.

(A) Cube 

(B) Cuboid 

(C) Sphere 

(D) Cylinder 

10.  ?

(A) 

(B) 

(C) 

(D) 

Answers																			
1.	D	**2.**	A	**3.**	C	**4.**	C	**5.**	B	**6.**	B	**7.**	C	**8.**	C	**9.**	C	**10.**	C

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Mathematics Assessment 3

Curriculum & Sample Questions

CURRICULUM

Numbers; Addition; Subtraction; Multiplication; Division; Fractions; Measurement; Time and Calendar; Money; Shapes; Patterns; Data Handling; Logical Reasoning

Sample Questions

The actual question paper contatins 30 MCQs, out of which 25 questions are based on Subject knowledge and 5 are based on Logical Reasoning. The duration of the test paper is 60 minutes.

1. Frame 4-digit numbers using 5, 8, 3, 0 only once. Which number is the third largest?

(A) 8503 (B) 8350

(C) 8305 (D) 8053

2. Write the value of ☆ and ☺, if 190 + 78 = 200 + ☆ = ☺.

(A) ☆ = 78, ☺ = 278 (B) ☆ = 78, ☺ = 268

(C) ☆ = 58, ☺ = 258 (D) ☆ = 68, ☺ = 268

3. 2356 + 3449 ☐ 9354 – 3549

(A) Greater than (B) Less than

(C) Equal to (D) None of these

4. By which number you multiply 9999 to get the largest 4 digit number?

(A) 1 hundred (B) 1 ten

(C) 1 one (D) 0 ones

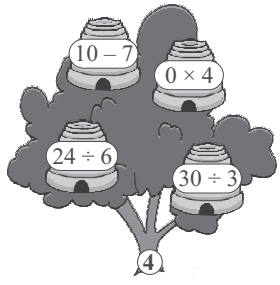
5. Match the correct number statement given on the tree with the number given on its trunk.

(A) 10 – 7

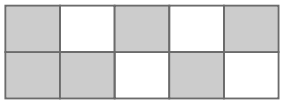
(B) 0 × 4

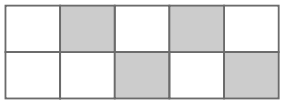
(C) 24 ÷ 6

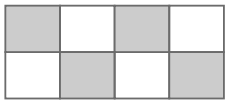
(D) 30 ÷ 3

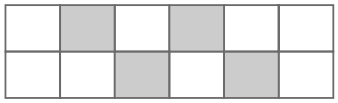


6. **Which of the following represents the fraction $\frac{4}{10}$?**

(A) 

(B) 

(C) 

(D) 

7. **How many 250 g are there in 1 kg?**

(A) 6 (B) 3

(C) 4 (D) 5

8. **What will be the time after 2 hours 20 minutes of the given time?**

(A) 4:40 (B) 4:50

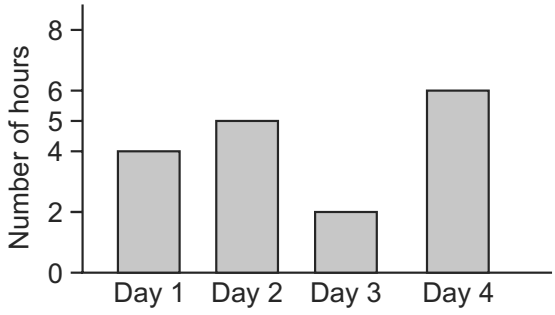
(C) 12:10 (D) 3:40

9. **Sheema bought 3 T-shirts and a pair of jeans for ₹ 450. If each T-shirt costs ₹ 75, find the cost of the pair of jeans.**

(A) ₹ 225 (B) ₹ 200

(C) ₹ 150 (D) ₹ 252

10. **If a person earns ₹ 100 an hour, how much money does he earn on day 2?**



(A) ₹ 400 (B) ₹ 200

(C) ₹ 600 (D) ₹ 500

Answers																			
1.	B	**2.**	D	**3.**	C	**4.**	C	**5.**	C	**6.**	B	**7.**	C	**8.**	B	**9.**	A	**10.**	D

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Mathematics Assessment 4

Curriculum & Sample Questions

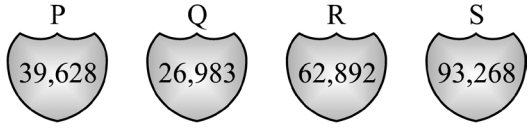
CURRICULUM

Numbers; Addition and Subtraction; Multiplication and Division; Factors and Multiples; Fractions; Decimals; Measurement and Money; Time and Calendar; Geometrical Figures; Perimeters and Areas; Patterns and Symmetry; Data Handling; Logical Reasoning

Sample Questions

The actual question paper contatins 30 MCQs, out of which 25 questions are based on Subject knowledge and 5 are based on Logical Reasoning. The duration of the test paper is 60 minutes.

1. Arrange the numbers given below in ascending order.



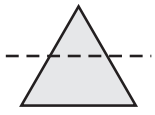
(A) S, R, P, Q

(B) S, R, Q, P

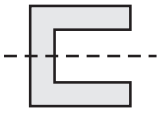
(C) Q, P, S, R

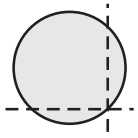
(D) Q, P, R, S

2. Which of the following shows the correct line of symmetry?

(A) 

(B) 

(C) 

(D) 

3. Which one of the following mathematical statements is correct?

(A) 5,973 = 5,000 + 97 + 3

(B) 76,393 = 76,000 + 390 + 93

(C) 80,083 = 80,880 + 800

(D) 4,325 = 4,000 + 300 + 20 + 5

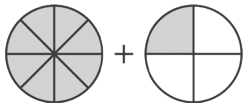
4. All the multiples of 8 are the factors of 16.

(A) False

(B) True

(C) Cannot say

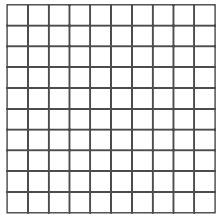
(D) None of these

5.  is _____.

(A) $\frac{9}{4}$ (B) $\frac{7}{4}$

(C) $\frac{5}{4}$ (D) $\frac{9}{8}$

6. **How many squares in the given grid are to be shaded to represent 0.96 – 0.36?**



(A) 10 (B) 20

(C) 30 (D) 60

7. **Find the total weight given here in kg and g?**

(A) 2 kg 700 g (B) 3 kg 200 g

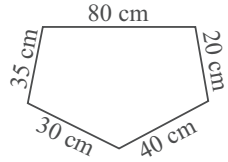
(C) 2 kg 750 g (D) 3 kg 700 g

8. **If radius of a circle is the third multiple of 4, then what is the diameter of the circle?**

(A) 12 cm (B) 8 cm

(C) 24 cm (D) 30 cm

9. **Find the perimeter of given figure in metres.**



(A) 20.50 m (B) 205 m

(C) 2.5 m (D) 2.05 m

10. **If each**  **stands for 50 elephants, and the forest officer says that he has**   **in all. Then, can you find the number of elephants that the forest officer is talking about?**

(A) 250 (B) 280

(C) 230 (D) None of these

Answers																			
1.	D	2.	C	3.	D	4.	A	5.	C	6.	D	7.	B	8.	C	9.	D	10.	B

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Mathematics Assessment 5

Curriculum & Sample Questions

CURRICULUM

Large Numbers; Four Operations; LCM and HCF; Fractions; Decimals; Measurement and Money; Time and Calendar; Basic Geometry; Perimeters and Areas; Solid Figures and Volumes; Patterns and Symmetry; Data Handling; Logical Reasoning

Sample Questions

The actual question paper contatins 30 MCQs, out of which 25 questions are based on Subject knowledge and 5 are based on Logical Reasoning. The duration of the test paper is 60 minutes.

1. Place value of 8 in B is _____ times greater than the place value of 8 in A.

A : 7652983
B : 7289345

(A) 1,000 (B) 100

(C) 10,000 (D) 8,000

2. If the smallest 6-digit number is divided by the largest 3-digit number, then the remainder is the _____.

(A) Largest 2-digit number (B) Smallest 3-digit number

(C) Smallest 2-digit number (D) None of these

3. The largest 4-digit number which is exactly divisible by each of 2, 3, 4, 5, 6 and 7 is _____.

(A) 9,630 (B) 9,660

(C) 9,830 (D) 9,980

4.

Class X	Class Y	Class Z
Total students = 30	Total students = 20	Total students = 25
Marks scored above 80 = 24	Marks scored above 80 = 18	Marks scored above 80 = 17

In which class the fraction of students who scored above 80 was the most?

(A) Class X (B) Class Y

(C) Class Z (D) Both class X and Y

5. What is the value of A?

0.525 × 1000 = 239.5 + A

(A) 298 (B) 285.5

(C) 273.05 (D) 281.5

6. John bought a pen for ₹ 90.80, a story book for ₹ 129.75 and spent ₹ 64.85 on transport. If he had 3 notes of rupees hundred initially, then how much money did he have at the end?

(A) ₹ 14.60 (B) ₹ 24.60

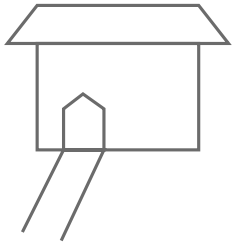
(C) ₹ 26.40 (D) ₹ 32.40

7. What fraction of 1 year is 73 days, if the year is not a leap year?

(A) $\frac{1}{3}$ (B) $\frac{1}{4}$

(C) $\frac{1}{5}$ (D) $\frac{1}{6}$

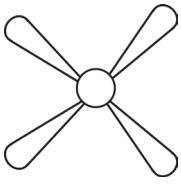
8. How many pairs of perpendicular lines are there in the given figure?

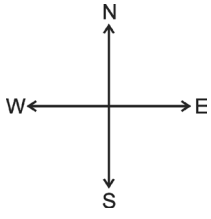


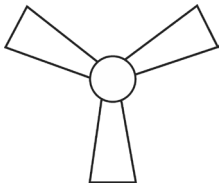
(A) 2 (B) 6

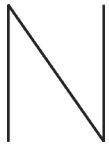
(C) 4 (D) 5

9. Which of the following figures has rotational symmetry of order 3?

(A) 

(B) 

(C) 

(D) 

10. If 1st October is Sunday, then 1st November will be _____ .

(A) Monday (B) Tuesday

(C) Wednesday (D) Thursday

Answers																					
1.	A	**2.**	B	**3.**	B	**4.**	B	**5.**	B	**6.**	A	**7.**	C	**8.**	B	**9.**	C	**10.**	C

ORANGE™ GLOBAL OLYMPIAD

Mathematics Assessment 6

Curriculum & Sample Questions

CURRICULUM

Number System; Whole Numbers; Playing with Numbers; Geometry; Integers; Fractions; Decimals; Mensuration; Algebra; Ratio and Proportion; Data Handling; Symmetry and Practical Geometry; Logical Reasoning

Sample Questions

The actual question paper contains 40 MCQs, out of which 32 questions are based on Subject Knowledge and 8 are based on Logical Reasoning. Out of 32 subject based questions, 7 questions have 2 keys (answers). The duration of the test paper is 60 minutes.

1. A student multiplied 4,386 by 44 instead of 36. By how much does his answer differ with the correct answer?

(A) 33,880 (B) 34,084

(C) 35,088 (D) 36,636

2. The product of two 2-digit numbers is 2,176. The product of their units digits is 16 and that of tens digits is 18. The numbers are _____.

(A) 64, 34 (B) 28, 92

(C) 68, 32 (D) 98, 22

3. Which of the following statements is true?

(A) If a number is divisible by 4, it must be divisible by 8.

(B) If a number divides the sum of two numbers exactly, it must exactly divide the numbers separately.

(C) The sum of two consecutive odd numbers is always divisible by 4.

(D) A number is divisible by 18, if it is divisible by both 3 and 6.

4. A bicycle wheel has 40 spokes. The angle between each pair of adjacent spokes is _____.

(A) 7° (B) 8°

(C) 9° (D) 10°

5. A diver was diving 100 m below see level. He further went down 20 m and came up 35 m again. How far below the sea level he dive?

(A) 85 m (B) –85 m

(C) 58 m (D) –58 m

6. **There are 1,500 type A employees in a company. The number of type B employees is $\frac{3}{5}$ the number of type A, and number of type C employees is $\frac{5}{9}$ the number of type B employees. The number of employees in the company is _____.**

(A) 2,500 (B) 2,700

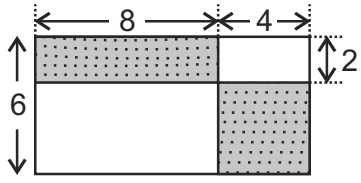
(C) 2,900 (D) 3,100

7. **Milk costs ₹ 19.50 per half litre and a curd packet of 400 gm costs ₹ 25. Shanky purchased three litres of milk and 2 kg of curd. What payment did he make?**

(A) ₹ 240 (B) ₹ 242

(C) ₹ 246 (D) ₹ 250

8. **The area of the shaded region is _____.**



(A) 32 sq units (B) 36 sq units

(C) 42 sq units (D) 44 sq units

9. **A scale costs twice as much as an eraser. A pen costs thrice as much as the scale. The total cost of the 3 items is ₹ 72. What is the cost of a pen?**

(A) ₹ 16 (B) ₹ 54

(C) ₹ 48 (D) ₹ 64

10. **Which of the following words is made of letters having only horizontal line of symmetry?**

(A) MAY (B) HIT

(C) BED (D) MOM

Answers																			
1.	C	**2.**	A,C	**3.**	C	**4.**	C	**5.**	A	**6.**	C	**7.**	B	**8.**	A	**9.**	C	**10.**	C

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Mathematics Assessment 7

Curriculum & Sample Questions

CURRICULUM

Integers; Fractions and Decimals; Data Handling; Simple Equations; Lines and Angles; The Triangle and its Properties; Congruence of Triangles; Comparing Quantities; Rational Numbers; Practical Geometry; Perimeter and Area; Algebraic Expressions; Exponents and Powers; Symmetry and Visualising Solid Shapes; Logical Reasoning

Sample Questions

The actual question paper contains 40 MCQs, out of which 32 questions are based on Subject Knowledge and 8 are based on Logical Reasoning. Out of 32 subject based questions, 7 questions have 2 keys (answers). The duration of the test paper is 60 minutes.

1. Sheer multiplied two numbers and got (–16) as the product. She then subtracted the second number from the first and got the answer as 10. The two numbers are _____.

(A) 2, – 8 (B) – 2, 8

(C) 4, – 4 (D) 4, – 6

2. If 5 is added to both the numerator and denominator of the fraction $\frac{5}{9}$, will the value of the fraction be changed and will this value increase or decrease?

(A) Yes value changes (B) No change in the value

(C) Value will decrease (D) Value will increase

3. Match each of the entries in column I with the appropriate entries in column II.

	Column I	**Column II**
(a)	$x - 2(x + 3) = 5$	(*i*) 30
(b)	$\frac{2x}{5} - \frac{x-3}{8} = \frac{1}{10}$	(*ii*) – 11
(c)	$\frac{x}{2} - \frac{x}{3} = 5$	(*iii*) 20
(d)	$\frac{7x}{10} - 4 = 10$	(*iv*) – 1

(A) (a)—(*iv*), (b)—(*ii*), (c)—(*i*), (d)—(*iii*) (B) (a)—(*ii*), (b)—(*iv*), (c)—(*i*), (d)—(*iii*)

(C) (a)—(*ii*), (b)—(*iv*), (c)—(*iii*), (d)—(*i*) (D) (a)—(*i*), (b)—(*ii*), (d)—(*iv*), (d)—(*iii*)

4. If a transversal cuts two parallel lines, then which of the following options is correct for the given statements?

Statement 1: Corresponding angles are equal.

Statement 2: Sum of alternate angles is 180°.

(A) Statement 1 is true and 2 is false (B) Statement 2 is true and 1 is false

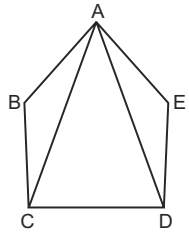
(C) Both statements are true (D) Both statements are false

5. **Two poles of 10 m and 15 m stand upright on a plane ground. If the distance between the tops of the poles is 13 m, then distance between their feet is _____.**

(A) 13 m (B) 12 m

(C) 12.5 m (D) 11 m

6. **ABCDE is a regular pentagons, then which of the following pair of triangles is congruent?**



(A) $\Delta ABC \cong \Delta AED$

(B) $\Delta ABC \cong \Delta ACD$

(C) $\Delta ACD \cong \Delta AED$

(D) None of these

7. **A student has to score 35% marks to pass an exam. Ashi scored 154 marks and failed by 21 marks. Find the maximum marks.**

(A) 400 (B) 425

(C) 450 (D) 500

8. **Which of the following statements are wrong?**

(i) Difference of two rational numbers is a rational number.

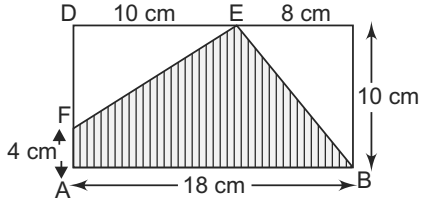
(ii) Subtraction is commutative on rational numbers.

(iii) Addition is commutative on rational numbers.

(A) (i) and (ii) (B) (i) only

(C) (i) and (iii) (D) All of these

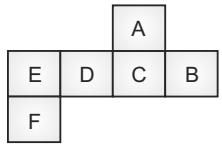
9. **In the given figure, area of the shaded region is _____.**



(A) 110 cm^2 (B) 98 cm^2

(C) 96 cm^2 (D) 130 cm^2

10. **Study the given net of a cube carefully and find the incorrect statement.**



(A) E and C are opposite faces.

(B) E and A are opposite faces.

(C) A and B are adjoint faces.

(D) B and D are opposite faces.

Answers																			
1.	A	**2.**	A,D	**3.**	B	**4.**	A	**5.**	B	**6.**	A	**7.**	D	**8.**	A	**9.**	A	**10.**	B

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Mathematics Assessment 8

Curriculum & Sample Questions

CURRICULUM

Rational Numbers; Linear Equations in One Variable; Understanding Quadrilaterals; Practical Geometry; Data Handling; Squares and Square Roots; Cubes and Cube Roots; Comparing Quantities; Algebraic Expressions and Identities; Visualising Solid Shapes; Mensuration; Exponents and Powers; Direct and Inverse Proportions; Factorisation; Introduction to Graphs; Playing with Numbers; Logical Reasoning

Sample Questions

The actual question paper contains 40 MCQs, out of which 32 questions are based on Subject Knowledge and 8 are based on Logical Reasoning. Out of 32 subject based questions, 7 questions have 2 keys (answers). The duration of the test paper is 60 minutes.

1. Which order shows the following rational numbers in ascending order?

(i) $\frac{-3}{5}$ **(ii)** $\frac{-7}{10}$ **(iii)** $\frac{-11}{15}$ **(iv)** $\frac{-13}{20}$

(A) (i), (ii), (iii), (iv) (B) (iii), (ii), (iv), (i)

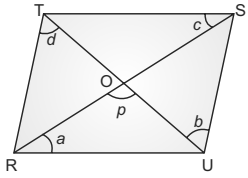
(C) (ii), (iii), (iv), (i) (D) (iv), (ii), (iii), (i)

2. If the angles of a triangle are in the ratio 2 : 3 : 4, then the difference between the greatest and the smallest angles is _____.

(A) 10° (B) 20°

(C) 30° (D) 40°

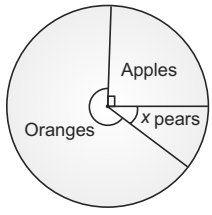
3. In the figure, RUST is a rhombus, ROS and UOT are straight lines intersecting at O, then a + b + c + d + p = _____.



(A) 200° (B) 270°

(C) 360° (D) 540°

4. The pie chart shows the number of fruits sold in a store. Given that the number of apples is 180 and number of oranges is 400, then the value of x in degrees is _____.



(A) 200° (B) 160°

(C) 80° (D) 70°

5. A number is multipled by half of itself and then 32 is added to the product. If the final result is 130, then the original number is _____.

(A) 14 (B) 7

(C) 9 (D) 5

6. Choose the correct statements.

(A) The cube root of 0.1728 is 0.12.

(B) If x^2 ends with 9, then x^3 ends with 7.

(C) The least number amongst $(0.4)^2$, $\sqrt{0.25}$, $\sqrt[3]{0.008}$ and 0.28 is $(0.4)^2$.

(D) None of these.

7. If the salary of A is 25% more than the salary of B, then what per cent of B's salary is less than A's salary?

(A) 25% (B) 20%

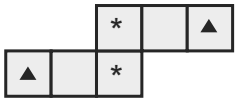
(C) 18% (D) 15%

8. The volume of a cuboid is $x^3 - x$, then the dimensions of the cuboid are _____.

(A) x, 1, $(x^2 - x)$ (B) x, 1, $(x - x^2)$

(C) x, $(1 + x)$, $(1 - x)$ (D) x, $(x + 1)$, $(x - 1)$

9. Which among the given dice can't be obtained using the given net.



(A) 

(B) 

(C) 

(D) 

10. For a fixed base 10, if the exponent decreases by 1, the number becomes _____.

(A) One-tenth of the previous number (B) Ten times of the previous number

(C) Hundredth of the previous number (D) Hundred times of the previous number

Answers																			
1.	B	**2.**	D	**3.**	B	**4.**	D	**5.**	A	**6.**	B,C	**7.**	B	**8.**	D	**9.**	A	**10.**	A

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Mathematics Assessment 9

Curriculum & Sample Questions

CURRICULUM

Number System; Polynomials; Coordinate Geometry; Linear Equations in Two Variables; Basic Geometry; Triangles; Quadrilaterals; Areas of Parallelograms and Triangles; Circles; Areas and Volumes; Statistics and Probability; Logical Reasoning

Sample Questions

The actual question paper contains 50 MCQs, out of which 40 questions are based on Subject Knowledge and 10 are based on Logical Reasoning. Out of 40 subject based questions, 15 questions have 2 keys (answers). The duration of the test paper is 60 minutes.

1. If $4^x - 4^{x-1} = 24$, then $(2x)^x$ equals _____.

(A) $4\sqrt{5}$ (B) 25

(C) $5\sqrt{5}$ (D) $25\sqrt{5}$

2. If $p + a = 2$, then $a^3 + 6ap + p^3 - 8$ equals _____.

(A) 0 (B) 1

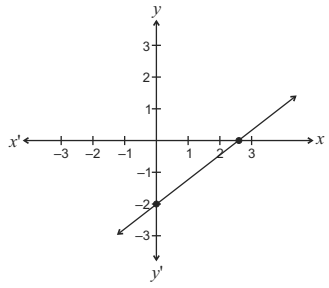
(C) –1 (D) none of these

3. A frog jumps double of its previous jump. If the frog is at (–3, 0) initially and jumps 2 units in the first jump on negative side, then its position after 3rd jump is

(A) (–15, 0) (B) (–9, 0)

(C) (–17, 0) (D) (–19, 0)

4. The correct equation for the given line is _____.



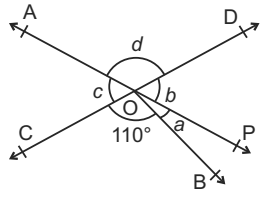
(A) $4x + 5y = 10$

(B) $4x - 5y = 10$

(C) $-4x + 5y = 10$

(D) $-4x - 5y = 10$

5. In the given figure, AB and CD intersect at O. OP is any ray and $a : c = 2 : 5$. Then, _____.



(A) $a = 20°$

(B) $c = 40°$

(C) $b = 50°$

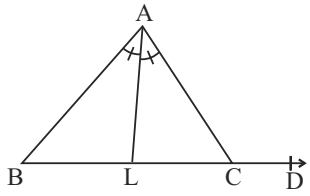
(D) $d = 120°$

6. **The ratio between the volume of a sphere and volume of a circumscribing right circular cylinder is _____.**

(A) 1 : 2 (B) 3 : 2

(C) 2 : 1 (D) 2 : 3

7. **The side BC of a ΔABC is produced to D. L is a point on BC such that AL bisects ∠A. Then, _____.**



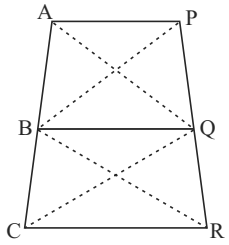
(A) $\angle ABC + \angle ACD = 2\angle ALC$

(B) $\angle ABC + \frac{1}{2}\angle ACD = \angle ALC$

(C) $2\angle ABC + \frac{1}{2}\angle ACD = 2\angle ALC$

(D) $\angle ABC + \angle ALC = \angle ACD$

8. **In the given figure, AP || BQ || CR. Then, _____.**



(A) ar(ΔAQC) = ar(PBR)

(B) ar(ΔCQR) = ar(ΔBPQ)

(C) ar(ΔCQR) = ar(ΔABQ)

(D) ar(ΔABQ) = ar(ΔPBQ)

9. **Three coins are tossed at a time. Then, _____.**

(A) The probability of getting two heads is $\frac{3}{8}$.

(B) The probability of getting one head equals the probability of getting two heads.

(C) The probability of getting three heads equals $\frac{1}{2}$.

(D) The probability of getting no head is $\frac{1}{4}$.

10. **A cylindrical container with diameter of base 56 cm contains sufficient water to submerge a rectangular solid of iron with dimensions 32 cm × 32 cm × 14 cm. What is the approximate rise in the water level, when the solid is completely submerged?**

(A) 4 cm (B) 6 cm

(C) 5 cm (D) 7 cm

Answers																			
1.	D	**2.**	A	**3.**	C	**4.**	B	**5.**	A,C	**6.**	D	**7.**	A	**8.**	A	**9.**	A,B	**10.**	B

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Mathematics Assessment 10

Curriculum & Sample Questions

CURRICULUM

Real Numbers; Polynomials; Pair of Linear Equations in Two Variables; Quadratic Equations; Arithmetic Progressions; Triangles; Coordinate Geometry; Introduction to Trigonometry; Some Applications of Trigonometry; Circles; Constructions; Areas Related to Circles; Surface Areas and Volumes; Statistics; Probability; Logical Reasoning

Sample Questions

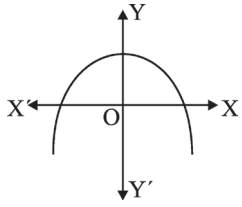
The actual question paper contains 50 MCQs, out of which 40 questions are based on Subject Knowledge and 10 are based on Logical Reasoning. Out of 40 subject based questions, 15 questions have 2 keys (answers). The duration of the test paper is 60 minutes.

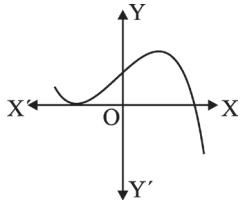
1. In a seminar, the number of participants in English, German and Sanskrit are 45, 75 and 135. The number of rooms required to house them, if each room has the same number of participants and of the same language, is _____.

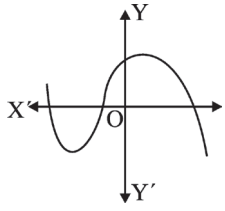
(A) 45 (B) 17

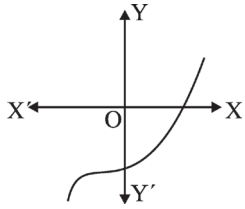
(C) 75 (D) 135

2. Which of the following graphs has at most two zeroes?

(A) 

(B) 

(C) 

(D) 

3. In $\triangle ABC$, $\angle A = x°$, $\angle B = y°$ and $\angle C = y + 20°$. If $y° - x° = 50°$, what type of triangle is ABC?

(A) Acute angled triangle (B) Obtuse angled triangle

(C) Right angled triangle (D) None of these

4. A dealer sells a toy for ₹ 24 and gains as much percent as the cost price of the toy. Find the cost price of the toy.

(A) ₹ 15 (B) ₹ 20

(C) ₹ 24 (D) ₹ 16

5. **Two cars A and B start from the same point and at the same time. 'A' travels at a constant speed of 10 km/hr but 'B' starts with 5 km/hr and every hour its speed increases by 0.25 km/hr. After how many hours will B overtake A?**

(A) 41 hours (B) 40 hours

(C) 42 hours (D) 39 hours

6. **A right triangle has hypotenuse 'p' cm and one side 'q' cm. If p – q = 1, the length of third side is _____.**

(A) $\sqrt{q-2}$ cm (B) $\sqrt{2q-1}$ cm

(C) $\sqrt{q+2}$ cm (D) $\sqrt{2q+1}$ cm

7. **The point (–3, t) divides the line segment joining the points (–5, –4) and (–2, 3) internally in the ratio 2:1. The value of 't' is _____.**

(A) $\frac{1}{3}$ (B) $\frac{2}{3}$

(C) $\frac{-1}{3}$ (D) $\frac{-2}{3}$

8. **A ladder of length 25 m is placed against a wall of a building. The foot of the ladder is 7 m from the base of the wall. If the top of the ladder slips by 4 m, then the foot of the ladder will slide by _____.**

(A) 5 m (B) 6 m

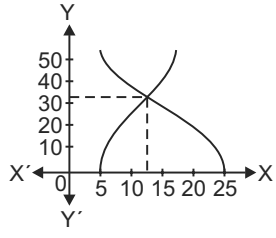
(C) 8 m (D) 9 m

9. **If a book containing 100 pages is opened at random, then the probability that the number on the page would be a "two digit number with both digits same" is _____.**

(A) $\frac{9}{100}$ (B) $\frac{90}{100}$

(C) $\frac{10}{100}$ (D) $\frac{20}{100}$

10. **In the given graph, the value of median of the data using the graph of less than and more than ogive is _____.**



(A) 12.5 (B) 30

(C) 30.5 (D) 35

Answers																			
1.	B	**2.**	A,B	**3.**	C	**4.**	B	**5.**	B	**6.**	D	**7.**	B	**8.**	C	**9.**	A	**10.**	A