2022
QUESTION BOOKLET

GRADE 7 & 8
JUVENILES

Time Allowed: 90 Mins.
Maximum Marks: 90

ICATS
MATHEMATICS
CONTEST 2022

ICATS MATHEMATICS CONTEST 2022
JUVENILES (GRADE 7 & 8)
TIME ALLOWED : 90 MINUTES, MAXIMUM MARKS : 90
TOTAL QUESTIONS : 30 MCQS

INSTRUCTIONS

1. DON'T START ATTEMPTING THE PAPER UNTIL INSTRUCTED BY THE INVIGILATORS.

2. INSTRUCTIONS FROM THE EXAMINATION INVIGILATORS MUST BE CARRIED OUT PROMPTLY.

3. CAREFULLY RECHECK YOUR NAME, FATHER NAME, SCHOOL NAME, ADDRESS ETC AT THE BUBBLE SHEET / ANSWER SHEET.

4. RECORD ALL ANSWERS ON THE BUBBLE SHEET ONLY. SELECT BEST ANSWER FROM THE FOUR GIVEN OPTIONS AND MARK ONLY ONE OPTION IN EACH QUESTION.

5. USE BLUE / BLACK INK TO FILL UP THE CIRCLES FOR YOUR ANSWERS ON THE BUBBLE SHEET. USE OF LEAD PENCIL IS NOT ALLOWED.

6. USE OF ANY HELPING MATERIAL INCLUDING CELL PHONES AND ELECTRONIC DEVICES IS STRICTLY PROHIBITED.

7. EVERY CORRECT ANSWER EARNS THREE POINTS. THERE WOULD BE NEGATIVE MARKING. ONE POINT WOULD BE DEDUCTED FOR EVERY INCORRECT ANSWER.

8. CANDIDATES MAY NOT LEAVE THE EXAMINATION ROOM UNESCORTED FOR ANY REASON, AND THIS INCLUDES USING THE WASHROOM.

9. NO MATERIALS OR ELECTRONIC DEVICES SHALL BE BROUGHT INTO THE ROOM.

10. THERE ARE FIVE CATEGORIES OF THE CONTEST AS UNDER:

A. TODDLERS (GRADE 1 & 2)

B. KIDS (GRADE 3 & 4)

C. JUNIORS (GRADE 5 & 6)

D. JUVENILES (GRADE 7 & 8)

E. ADOLESCENTS (GRADE 9 & 10 / O-LEVELS)

11. REGISTERED STUDENTS CAN PARTICIPATE IN THE CONTEST.

12. NO CANDIDATE SHALL TAKE OUT OF THE HALL ANY ANSWER BOOK(S) OR PART OF AN ANSWER BOOK, WHETHER USED OR UNUSED, OR OTHER SUPPLIED MATERIAL.

13. IF A PARTICIPANT DOES NOT UNDERSTAND A WORD OR PHRASE ON THE EXAM PAPER, NEITHER EXAMINER NOR INVIGILATOR IS PERMITTED TO ANSWER.

14. FOR INFORMATION ABOUT UPCOMING CONTESTS OR PROVIDING VALUABLE FEEDBACK, PLEASE VISIT WWW.CATSCONTESTS.ORG

15. ANY ACADEMIC MISCONDUCT OR MALPRACTICE MUST BE REPORTED TO INTERNATIONAL CATS CONTESTS AT INFO@CATSCONTESTS.ORG

Q1. Which of the following would be an appropriate unit to measure sugar for a cookie recipe?

A liters   **B** cups   **C** kilograms   **D** pounds

Q2. Usain Bolt set a world record of 9.58 seconds for the 100 meter dash. White-tailed deer can run at 48 kilometers per hour for short periods. If Mr. Bolt and a white-tailed deer run a 100 meter dash at these speeds, who would win, and by how much?

A Mr. Bolt wins by 3.75 seconds   **C** Deer wins by 3.75 seconds

B Mr. Bolt wins by 2.08 seconds   **D** Deer wins by 2.08 seconds

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Q3. After getting his wisdom teeth pulled, Matt was prescribed 60mg of Codeine to be taken every 4 hours for 5 days. The pharmacy has 30mg pills. How many pills should Matt receive when filling the prescription?

A 72   **B** 60   **C** 30   **D** 24

Q4. Derek is purchasing lunch meat for the class picnic. There are 300 people attending the picnic. Derek expects that for every 10 people 11 sandwiches will be eaten and that 20 pounds of meat will make 90 sandwiches. How much lunch meat should Derek buy?

A $73^{1/3}$ pounds   **B** $67^{2/3}$ pounds   **C** 110 pounds   **D** 330 sandwiches

Q5. If the 9th day of a month is 4 days earlier than Wednesday, what will be the 20th day of the month?

A Monday   **B** Tuesday   **C** Wednesday   **D** Thursday

Q6. 40% of a number is more than 20% of 650 by 190. Find the number?

A 600   **B** 700   **C** 800   **D** 900

Q7. Today is Khadija's birthday. After one year, she will become two times as she was ten years ago. What is the current age of Khadija?

A 19   **B** 20   **C** 21   **D** 22

Q8. Mansoor-Ul-Haque and Aaqib are working on a special assignment. Mansoor-Ul-Haque needs 6 hours to type 32 pages on a computer and Aaqib needs 5 hours to type 40 pages. If both of them work together on two different computers, how much time is needed to type an assignment of 110 pages?

A 7 hour 15 minutes   **C** 8 hour 15 minutes

B 7 hour 30 minutes   **D** 8 hour 30 minutes

Q9. Joey participated in a dance-a-thon. His team started dancing at 10:00am on Friday and stopped at 6:00pm on Saturday. How many hours did Joey's team dance?

A 52 　　　**B** 56 　　　**C** 30 　　　**D** 32

Q10. Sherman took his pulse for 10 seconds and counted 11 beats. What is Sherman's pulse rate in beats per minute?

A 210 beats per minute 　　　**C** 66 beats per minute
B 110 beats per minute 　　　**D** 84 beats per minute

Q11. A father said to his son, "I was as old as you are at the present at the time of your birth". If the father's age is 38 years now, the son's age five years back was?

A 33 years 　　　**B** 19 years 　　　**C** 14 years 　　　**D** 38 years

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Q12. Max goes to the gym every fourth day. Ellen's exercise routine is to go every third day. Today is Monday and both Max and Ellen are at the gym. What will the day of the week be the next time they are BOTH at the gym?

A Sunday 　　　**B** Wednesday 　　　**C** Friday 　　　**D** Saturday

Q13. The average of the marks of 12 students in a class is 36. If the marks of each student are doubled, find the new average?

A 72   **B** 45   **C** 37   **D** 79

Q14. A total of 300 chocolates were distributed among 120 boys and girls such that each boy received 2 chocolates and each girl received 3 chocolates. Find the respective number of boys and girls?

A 70, 50   **B** 60, 60   **C** 50, 70   **D** 40, 80

Q15. The average of 20 numbers is zero. Of them, at the most, how many may be greater than zero?

A 0   **B** 1   **C** 10   **D** 19

Q16. In a class of 100 students, 50 students passed in Mathematics and 70 passed in English, 5 students failed in both Mathematics and English. How many students passed in both the subjects?

A 50   **B** 40   **C** 35   **D** 25

Q17. Find the value of X if

$$X = 2 + 2 - 2 \times 2 \div 2$$

A 0　　　　**B** 1　　　　**C** 2　　　　**D** 4

Q18. In a town of population 100,000, 20% have internet connection. And those who have internet connection, 15% use PTCL internet service. How many people have internet service other than PTCL?

A 3,000　　　**B** 7,000　　　**C** 12,000　　　**D** 17,000

Q19. A clock strikes once at 1 o'clock, twice at 2 o'clock, thrice at 3 o'clock and so on. How many times will it strike in 24 hours?

A 78　　　**B** 136　　　**C** 156　　　**D** 196

Q20. If 30% of all women are voters and 42% of the population are women, what percent of the population are women voters?

A 17.4%　　　**B** 25.20%　　　**C** 12.60%　　　**D** None of these

Q21. Can you find the chosen number from this square using the clues below?

1. The number is odd.
2. It is a multiple of three.
3. It is smaller than 7×4.
4. Its tens digit is even.
5. It is the greater of the two possibilities.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

A 15   **B** 21   **C** 23   **D** 27

Q22. A little monkey had 60 peaches. On the first day he decided to keep 3/4 of his peaches. He gave the rest away. Then he ate one. On the second day he decided to keep 7/11 of his peaches. He gave the rest away. Then he ate one. On the third day he decided to keep 5/9 of his peaches. He gave the rest away. Then he ate one. On the fourth day he decided to keep 2/7 of his peaches. He gave the rest away. Then he ate one. On the fifth day he decided to keep 2/3 of his peaches. He gave the rest away. Then he ate one. How many did he has left at the end?

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

Q23. My age this year is a multiple of 8. Next year it will be a multiple of 7. How old am I?

A 32   **B** 36   **C** 48   **D** 54

Q24. Anna put some 5 rupee coins on the table. One half of them were tails up. Anna turned over two of the coins, and then one third of them were tails up. How many coins did Anna put on the table?

A 8   **B** 10   **C** 12   **D** 14

Read the text below and answer the following Questions 25 and 26.

Andrew decorated 20 biscuits to take to a party. He lined them up and put icing on every second biscuit. Then he put a cherry on every third biscuit. Then he put a chocolate button on every fourth biscuit. So there was nothing on the first biscuit.

Q25. How many biscuits had no decoration?

A 5   **B** 6   **C** 7   **D** 8

Q26. Which biscuit got all three decorations?

A 8th   **B** 9th   **C** 11th   **D** 12th

Q27. What is the weight of 🔴 + 🔺 − 🥫 ?

100 200	200 300 400	300 400 500
kg	kg	kg
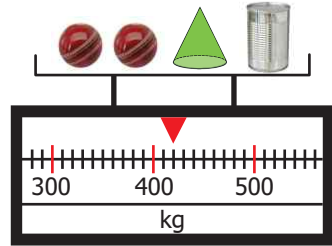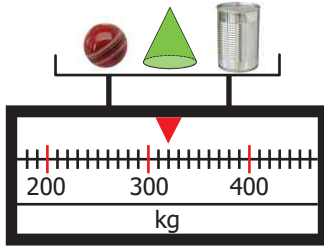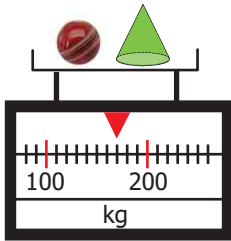
A 150 kg **B** 20 kg **C** 50 kg **D** 10 kg

Q28. Susan made a number pattern: 1, 5, 13, 29, ... She started the number pattern using the rule: multiply the previous number by 2 and then add 3 to the result to get the next number. What is the 8th number in her pattern?

A 125 **B** 253 **C** 509 **D** 61

Q29. A train can travel 50% faster than a car. Both start from point A at the same time and reach point B, 75 kms away from A, at the same time. On the way, however, the train lost about 12.5 minutes while stopping at the stations. The speed of the car is:

A 100 kmph **B** 110 kmph **C** 120 kmph **D** 130 kmph

Q30. A group of eight children in Class 6 were measuring water using measuring cylinders. They coloured the water to make reading the scales easier. They lined up the cylinders in two neat rows, each labelled with a child's name and the amount they had measured out.

Then Harry opened the window and the wind blew most of the labels onto the floor! "Oh! Harry!" they all wailed. Can you relabel the cylinders for them?
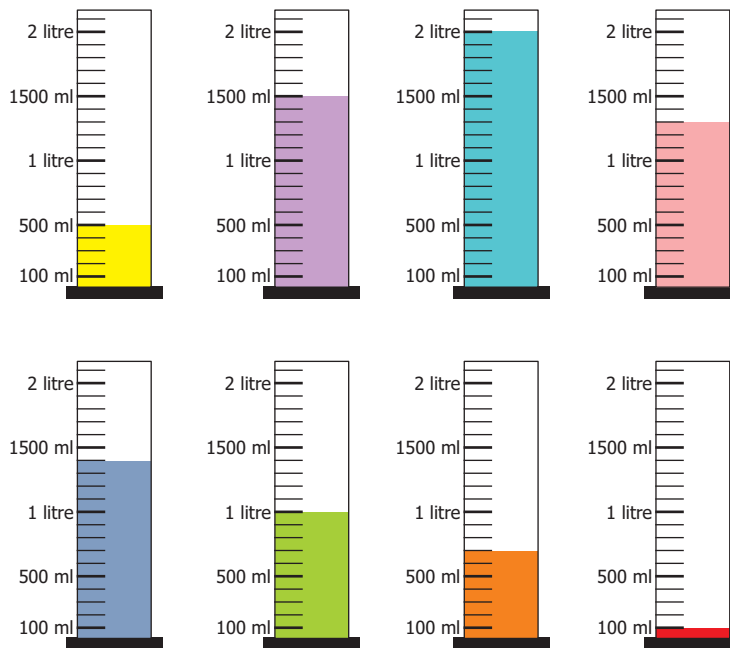
Ahmed had measured out just a thousand millilitres and Belinda twice as much as Ahmed. Grace had measured out three-quarters of the amount that Belinda had done and Freddie had half the amount that Ahmed had measured out.

Which one is Freddie's cylinder?

A	Cylinder with yellow coloured water	C	Cylinder with blue coloured water
B	Cylinder with green coloured water	D	Cylinder with red coloured water

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National Toppers ICATS Art Contest 2022

Student Name	Father Name	Grade	School
HUMNA NADIR	M. NADIR IKRAM	1	FOUNDATION PUBLIC SCHOOL
HAIDER ALI	ALI MUSHTAQ	2	ARMY PUBLIC SCHOOL & COLLEGE
MUHAMMAD YOUSAF	KAMRAN ASHRAF	3	KOHSAR CHILDREN'S ACADEMY
MUHAMMAD ZAID	M. SOHAIB NIZAMI	4	GENERATIONS SCHOOL
HANIA ABID	MRS. ASMA LATIF	5	FATIMA FERTILIZER SCHOOL
RUQAIYAH ALI ASGHER	ALI ASGHER KHAMBATWALA	5	MSB EDUCATIONAL INSTITUTE
RAMISHA ALI	ABID ALI MUGHAL	6	GOVT. QUEEN MARY GRADUATE COLLEGE
SYEDA FATIMA SURIYA	SYED TAHIR HUSSAIN	7	BEACONHOUSE SCHOOL SYSTEM
MANAL ARSHAD	MUHAMMAD ARSHAD	8	HABIB GIRLS SCHOOL
MARYAM SHAHID	SHAHID IQBAL	9	BAHRIA COLLEGE
AREEBA KHAN	DURAIZ KHAN	10	PRESENTATION CONVENT HIGH SCHOOL

Congratulations

National Toppers ICATS Creative Writing Contest 2022

Student Name	Father Name	Grade	School
HASSAN WASEEM	M. WASEEM	1	PAKISTAN INT'L PUBLIC SCHOOL
M. AFNAN SUFDER	SUFDER HUSSAIN	2	ARMY PUBLIC SCHOOL AND COLLEGE SYSTEM
FATIMA NOOR	BILAL YOUSAF	3	LAHORE GRAMMAR SCHOOL
M. ABDULLAH HASSAN	RIZWAN AHMAD	3	LAHORE GRAMMAR SCHOOL
SHANZAY ADNAN	ADNAN FAROOQ	3	ARMY PUBLIC SCHOOL
PRATIK PARKASH	PARKASH LAL	4	THE CITY SCHOOL
DANIYAL SHAHZAD	SHAHZAD ASLAM	5	LAHORE GRAMMAR SCHOOL
HASSAN ALI	IMRAN ALI SHAH	6	ARMY PUBLIC SCHOOL & COLLEGE
MAIDA SOHAIL	SOHAIL AKRAM	7	BEACONHOUSE SCHOOL SYSTEM
ATIYA ATIF	MUHAMMAD ATIF NAZAR	8	ROOTS IVY INTERNATIONAL SCHOOL
AYESHA HAFEEZ	CH. GHULAM HAFEEZ	8	ISLAMABAD COLLEGE OF ARTS & SCIENCES
PARTHAM KUMAR	DOULAT RAM	9	AGA KHAN HIGHER SECONDARY SCHOOL
AMNA HUSNAIN	SYED ALI ZAFAR	10	AES SCHOOL FOR GIRLS
RASIKH JAVED	M JAVED	10	BAHRIA FOUNDATION COLLEGE

Congratulations

Compete
if you are the best

www.catscontests.org