



CREST Mathematics Olympiad (CMO)  
Previous Year Paper (2021-22)

**Class 5**

**Time Allowed: 1-hour**

**Maximum Marks: 60**

- Additional **10 minutes** will be allotted to fill up information on the OMR Sheet, before the start of the exam.
- Fill in all the mandatory fields clearly on the OMR Sheet.
- There are **2 sections** in the question paper namely the **Practical Mathematics & Achievers' Section** consisting of **40 questions (1 mark each) & 10 questions (2 marks each)**, respectively.
- There is no negative marking. The use of a calculator is not permitted.
- There is **only ONE correct option** to a given question.
- Use **HB Pencil or Blue / Black ball point pen only** for marking the correct choice of answers on the OMR Sheet.
- Rough work is to be done in the space provided in the test booklet. Extra plain sheet may be provided by the school for the rough work.
- The OMR Sheet is to be handed over to the invigilator at the end of the exam.
- No candidate is allowed to carry any textual material, printed or written, bits of paper, any electronic device, etc. inside the examination hall.
- The use of unfair means may result in the cancellation of the exam. Any such instances may be reported at **+91-98182-94134** or **info@crestolympiads.com**

**DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO**

**FILL IN THE DETAILS**

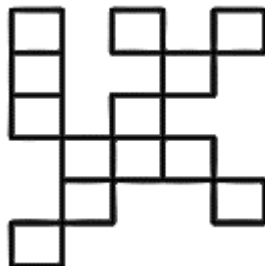
Student Name: \_\_\_\_\_

Class: \_\_\_\_\_ Section: \_\_\_\_\_

Enrollment No: \_\_\_\_\_

## Practical Mathematics (Each Question is 1 Mark)

- Sara, Jack, and Katy have \$167,842.50, \$142,356.75, and \$324,567.25 in their bank accounts, respectively. How much money do they have altogether?
  - \$624,856.50
  - 634,544.50
  - \$634,766.50
  - \$645,784.50
- Rony invested a certain amount of money in a bank and got back \$8,400. If the bank paid an interest of \$700, then find the amount invested by Rony.
  - \$9,100
  - \$8,200
  - \$7,700
  - \$8,100
- The capacity of a container is 1.33 L. It is filled with 252 mL of water, 385 mL of juice and 437 mL of syrup. Find the amount of liquid that can still be poured into the container:
  - 432 mL
  - 256 mL
  - 198 mL
  - 344 mL
- Arya travelled 38 km 750 m to go to his cousin's home. Out of this, she travelled 1 km 900 m by walk, 4 km 390 m by rickshaw, 7 km by auto and the rest of the distance by bus. Find the distance that she travelled by bus:
  - 40 km 270 m
  - 32 km 760 m
  - 25 km 460 m
  - 73 km 190 m
- Which of the given options is the HCF of 272, 646 and 1870?
  - 49
  - 34
  - 14
  - 7
- What is a polygon with 10 sides called?
  - Decagon
  - Nonagon
  - Hexagon
  - Octagon
- Find the area of the given figure made up of equal squares such that the side of each square is 19 cm:



- $5,723 \text{ cm}^2$
- $3,632 \text{ cm}^2$
- $4,837 \text{ cm}^2$
- $4,693 \text{ cm}^2$

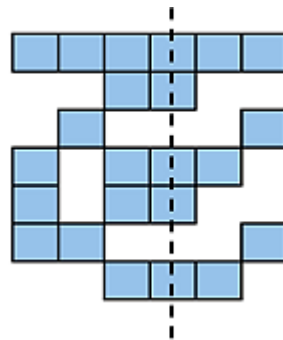
8. To practice for her championship, Angelina practiced for 3 hours 35 minutes in the morning and 2 hours 28 minutes in the afternoon on all weekdays. On weekends, she practices for 3 hours in the morning and 3 hours in the evening. How many hours did she practice for in two weeks?

- a. 73 hours 45 minutes  
 b. 84 hours 30 minutes  
 c. 90 hours  
 d. 79 hours 55 minutes

9. Fill in the blank:  
 The decimal 0.26 is equal to the fractional number \_\_\_\_\_.

- a.  $\frac{90}{24}$   
 b.  $\frac{23}{9}$   
 c.  $\frac{234}{900}$   
 d.  $\frac{423}{90}$

10. How many more squares must be added so that the given line becomes the line of symmetry in the given figure?



- a. 6  
 b. 5  
 c. 4  
 d. 8

11. Ana works for 3.5 hours in the morning and 2 hours in the evening every day. she earns \$75 per hour. Find her earnings of a week:

- a. \$3,000  
 b. \$2,500  
 c. \$2,887.5  
 d. \$4,200.5

12. Which of the following options is equal to MCDXXV?

- a. 7500 – 6000  
 b. 5550 – 4125  
 c. 9183 – 3830  
 d. 6750 – 3125

13. Two pounds of oranges cost \$25, and five pounds of bananas cost \$30. I purchased three-fourths of a pound of oranges and one-third of a pound of bananas. How much money do I still have if I had 100 earlier?

- a. \$88.63  
 b. \$73.25  
 c. \$53.06  
 d. \$67.52



**21.** A square piece of paper when folded thrice such that the length becomes  $\frac{1}{3}$  of its original length, has a perimeter of 1144 cm. Find the area of the original square:

- a. 1,98,316  $\text{cm}^2$
- b. 1,73,864  $\text{cm}^2$
- c. 1,64,363  $\text{cm}^2$
- d. 1,84,041  $\text{cm}^2$

**22.** What angle is made by the minute hand in one hour?

- a.  $90^\circ$
- b.  $270^\circ$
- c.  $360^\circ$
- d.  $180^\circ$

**23.** Find the fraction number if:

1. It is an improper fraction.
2. It has even digits in its denominator.
3. In its simplest form, the mixed fraction is  $19\frac{3}{11}$ .
4. The sum of its numerator and denominator is 892






- a.  $\frac{848}{44}$
- b.  $\frac{822}{66}$
- c.  $\frac{173}{719}$
- d.  $\frac{234}{658}$

**24.** Find the value of:

$$\frac{1}{\frac{2}{3}} + \frac{4}{\frac{5}{3}} = ?$$

- a.  $\frac{18}{90}$
- b.  $\frac{13}{35}$
- c.  $\frac{84}{60}$
- d.  $\frac{117}{30}$

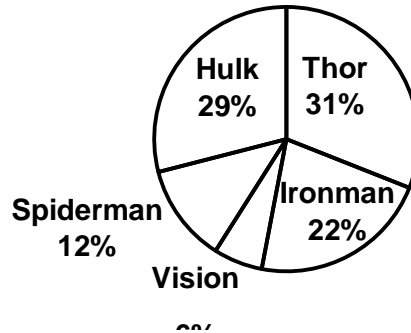
**25.** The given table shows the number of t-shirts a school ordered. Find the total number of t-shirts ordered for the size-large and extra-large:

Size	Number of T-shirts ordered
Small	
Medium	
Large	
Extra large	
1  = 50 t-shirts	

- a. 100
- b. 825
- c. 550
- d. 600

26. In a school, 6,500 Students were asked to write about their favourite superhero. They chose their topic as per the graph. Find the number of students that wrote about the 2nd most popular superhero:

### Favourite Superhero



- a. 3,120  
b. 2,632  
c. 1,424  
d. 1,885
27. Solve:  
 $3\frac{1}{3} + 5\frac{2}{11} + 2\frac{2}{5}$
- a.  $10\frac{151}{165}$   
b.  $9\frac{10}{29}$   
c.  $9\frac{12}{35}$   
d. None of these
28. How many lines of symmetry does a regular hexagon have?  
 a. 3  
b. 4  
c. 6  
d. 7
29. What will be the cost of flooring a room measuring 12 m x 15 m with square tiles of each side measuring 0.5 m at the rate of \$50 per tile?  
 a. \$36,000  
b. \$30,000  
c. \$15,000  
d. \$20,000
30. The head girl of a school was elected with the voting ratio of 4:1. If 3,500 votes were cast, then how many votes did she get?  
 a. 2,500  
b. 3,200  
c. 3,000  
d. 2,800
31. 5 square tables of side 45 cm are placed side to side to create a big rectangular table. Find the perimeter of this rectangular table:  
 a. 5 m 40 cm  
b. 2 m 25 cm  
c. 4 m 50 cm  
d. 4 m 15 cm

- 32.** Find the value of:  
 $244 + (8 \times 4) - 318 \div 6 =$
- a. 203  
c. 329
- b. 223  
d. 429
- 33.** Given that  $(k - 8)$  is the highest common factor of 56 and 77, the value of  $k$  is:
- a. 7  
c. 15
- b. 111  
d. 16
- 34.** A is a 3-digit number and B is the number formed by reversing the digits of A. The difference between their digits of ten's place is:
- a. 9  
c. 0
- b. 1  
d. 2
- 35.** The diameter of a circle passes through \_\_\_\_\_.
- a. the centre  
c. anywhere in the interior
- b. the circumference  
d. always two points
- 36.** Mrigank travelled 298 km north and Ajit travelled 890 km south from the same point. Find the distance between them now.
- a. 700 m  
c. 989 m
- b. 849 m  
d. 1188 m
- 37.** Which of the following is correct?
- a. Sum of like fractions = (Common denominator) / (Sum of their numerators)  
b. Sum of like fractions = (Difference of their numerator) / (Common denominator)  
c. Sum of like fractions = (Sum of their numerators) / (Common denominator)  
d. None of these
- 38.** The corner store sold 129.91 L of milk on Thursday and 11.32 L more than this quantity on Friday. The following day, 18.94 L less milk was sold than on Friday. How many litres of milk did they sell on Saturday?
- a. 160.17 L  
c. 122.29 L
- b. 137.53 L  
d. 99.65 L
- 39.** How many lines of symmetry does an isosceles triangle have?
- a. One  
c. Three
- b. Two  
d. Four
- 40.** The difference of the greatest and the least fractions out of  $\frac{6}{7}$ ,  $\frac{7}{8}$ ,  $\frac{8}{9}$  and  $\frac{9}{10}$  is:
- a.  $\frac{3}{70}$   
c.  $\frac{1}{40}$
- b.  $\frac{1}{56}$   
d.  $\frac{1}{72}$

## Achiever's Section (Each Question is 2 Marks)

41. Find the values of P, Q and R in the given long division algorithm:

$$\begin{array}{r}
 \phantom{403} \overline{) 386163} \\
 \underline{-362Q} \\
 2346 \\
 \underline{-2015} \\
 3313 \\
 \underline{-3224} \\
 \phantom{0}R9
 \end{array}$$

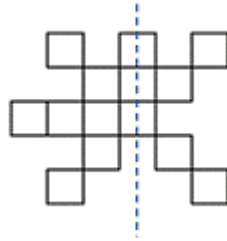
- a. P - 8, Q - 9, R - 12  
 b. P - 5, Q - 7, R - 8  
 c. P - 4, Q - 9, R - 10  
 d. P - 3, Q - 7, R - 8
42. The ratio between the length and width of a rectangular field is 4:11. If the length is 624 m, then find the distance travelled by Priya if she took 7 rounds of the field:
- a. 40 km 270 m  
 b. 73 km 190 m  
 c. 32 km 760 m  
 d. 24 km 340 m
43. Which number should be added to 7352 so that it becomes divisible by 43?
- a. 9  
 b. 5  
 c. 4  
 d. 1
44. What is the measure of the two angles between hour and minute hand of a clock at 10 o'clock?
- a. 120°, 240°  
 b. 60°, 300°  
 c. 90°, 270°  
 d. 30°, 330°
45. Out of the given options, which values of P, Q and R are applicable on the given equation:

$$\boxed{P} \times \boxed{Q} - \boxed{R} = 29,18,400$$

- a. P - 8000, Q - 0, R - 2,53,384  
 b. P - 7890, Q - 560, R - 15,00,000  
 c. P - 3183, Q - 109, R - 17,21,392  
 d. P - 1556, Q - 654, R - 82,56,238
46. In a class, the average attendance of students is 70. Aarav's attendance is 23% more than the class average and Aditya's attendance is 35% less than the class average. Find the sum of their attendance:
- a. 179.25  
 b. 70.75  
 c. 131.6  
 d. 150.5



47. How many squares have to be added in the given figure for it to be symmetrical along the given line of symmetry?



- a. 3  
b. 5  
c. 8  
d. 2
48. In a park, Richard noticed that there were 46 legs. How many people and dogs were there?
- a. 8 people and 4 dogs  
b. 9 people and 7 dogs  
c. 10 people and 5 dogs  
d. 10 people and 6 dogs
49. Which of the given options are correct to complete the given table using the formula:  
 $y = 4(x - 1/2)$ ?

X	3	7	9
Y			

- a. 10, 26, 34  
b. 12, 10, 24  
c. 10, 34, 26  
d. 10, 16, 34
50. In a class  $1/6$  of the children are girls and the rest are boys. If  $3/5$  of the girls and  $1/5$  of the boys are absent, what fraction of the class is present?
- a.  $1/30$   
b.  $4/11$   
c.  $11/15$   
d.  $27/47$

## Answer Key

1. c   2. c   3. b   4. c   5. b   6. a   7. d   8. b   9. c   10. a  
11. c   12. b   13. a   14. d   15. c   16. a   17. a   18. d   19. b   20. a  
21. d   22. c   23. a   24. d   25. d   26. d   27. a   28. d   29. a   30. d  
31. a   32. b   33. c   34. c   35. a   36. c   37. c   38. c   39. a   40. a  
41. b   42. c   43. d   44. b   45. b   46. c   47. d   48. b   49. a   50. c