



MATHEMATICS

School Level Examination

GRADE

7

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED TO DO SO

- * All questions are compulsory.
- * Read the instructions on the **ANSWER SHEET** and fill in your **NAME, CLASS and OTHER INFORMATION**.

To mark your choice of answer by darkening the circles in the Answer Sheet, use an **HB Pencil** only.

- * You **MUST** record your answers on the **ANSWER SHEET**.
- * There are 40 **MULTIPLE CHOICE QUESTIONS**. Use the information provided to choose the **BEST** answer among the four possible options.

On your **ANSWER SHEET** fill in the oval that matches your answer.

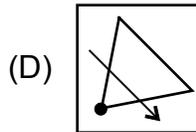
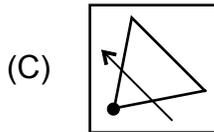
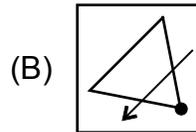
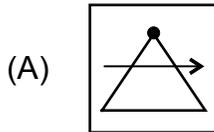
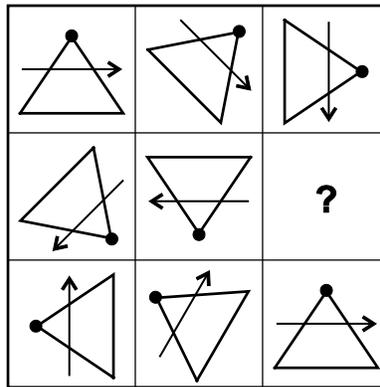
- * Marks are **NOT** deducted for incorrect answers.
- * Return the **Answer Sheet** to the invigilator at the end of the examination.
- * Write your Roll No. on the Question Paper too and take it home for future reference.
- * You are **NOT** allowed to use a calculator.

You may use a ruler and spare paper for rough work.

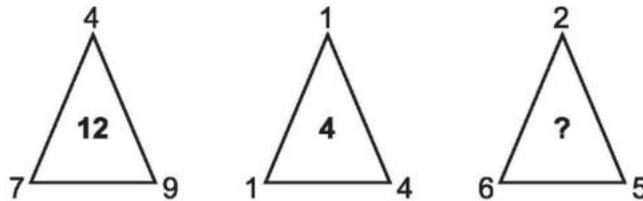
Section - A

(This section contains 8 multiple choice questions. Each question has four choices (A), (B), (C) and (D), out of which only ONE is correct)

- R is the mother of P; P is the sister of S; S is the father of J. How is R related to J?
 (A) Mother (B) Grandmother
 (C) Aunt (D) Data inadequate
- Find the missing figure in the given image.



- Which number replaces the question mark?



- (A) 1 (B) 4
 (C) 9 (D) 12
- (i) $A + B$ means A 'is the father of' B.
 (ii) $A - B$ means A 'is the wife of' B.
 (iii) $A \times B$ means A 'is the brother of' B.

If $A - C + B$, which of the following statements is true?

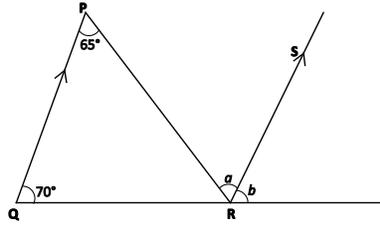
- (A) B is the brother of A (B) A is the mother of B

11. In a college, $\frac{1}{5}$ of the students like Basketball, $\frac{1}{6}$ of the remaining students like Football and $\frac{1}{5}$ of the further remaining students like Cricket. What is the total number of students if 200 students do NOT like any game?
- (A) 365 (B) 475
(C) 465 (D) 375
12. Simplify $32.6 - 0.8$ of $(8.4 - 3.6) + 0.6 \times 3.06$.
- (A) 468.91 (B) 474.42
(C) 30.59 (D) 30.27
13. Simplify $(5 \times 10^{17}) \div (4 \times 10^{12})$ and express it in scientific notation.
- (A) 12.5×10^5 (B) 125×10^5
(C) 1.25×10^{-5} (D) 1.25×10^5
14. The number of lines of symmetry and the order of rotational symmetry respectively of a square is _____.
- (A) 2, 2 (B) 4, 4
(C) 2, 4 (D) 4, 2
15. Two sides of a triangle are 6 cm and 11 cm. What could be the length of the third side so a triangle can be constructed?
- (A) 4 cm (B) 13 cm
(C) 17 cm (D) 18 cm
16. A wire is $(7x - 3)$ metres long. Out of which, a length of $(4x - 6)$ metres is cut for use. If the remaining wire is used for making an equilateral triangle, then what is the length of each side of the triangle so formed?
- (A) $x - 1$ (B) $x + 2$
(C) $x + 1$ (D) $\frac{(11x - 9)}{3}$
17. If an angle is 36° less than two times of its supplement, then the smaller angle is _____.
- (A) 71° (B) 72°
(C) 108° (D) 109°
18. The algebraic expression for the statement '*twice a number p squared subtracted from thrice the sum of a number and five*' is _____.
- (A) $2p^2 - 3(p + 5)$ (B) $3(p + 5) - 2p^2$
(C) $3(p + 5) - 2p^2$ (D) $2(p + 5) - 3p^2$
19. The mode of the unimodal data 7, 8, 9, 8, 9, 10, 9, 10, 11, 10, 11, 12 and x is 10. The value of x is _____.
- (A) 7 (B) 8

(C) 10

(D) 12

20. In the given figure, $PQ \parallel RS$. Find the value of $b - a$.



(A) 5°

(B) 15°

(C) 65°

(D) 70°

21. The sum of money that will produce ₹ 466.95 as simple interest in 9 months at 11% p.a. is

(A) ₹ 472

(B) ₹ 5,660

(C) ₹ 5,600

(D) ₹ 50,940

22. The angles of a triangle are arranged in descending order of their magnitudes. If the difference between two consecutive angles is 10° , then all the three angles are _____.

(A) $60^\circ, 50^\circ, 40^\circ$

(B) $85^\circ, 75^\circ, 65^\circ$

(C) $65^\circ, 55^\circ, 45^\circ$

(D) $70^\circ, 60^\circ, 50^\circ$

23. If $\triangle ABC$ and $\triangle DBC$ are on the same base BC, $AB = CD$ and $AC = DB$, then which of the following gives a congruence relationship?

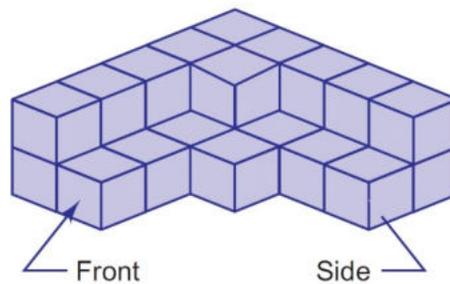
(A) $\triangle ABC \cong \triangle DCB$

(B) $\triangle ABC \cong \triangle DBC$

(C) $\triangle ABC \cong \triangle CBD$

(D) $\triangle ABC \cong \triangle BDC$

24. The number of unit cubes in the given structure is _____.



(A) 17

(B) 18

(C) 26

(D) 27

25. Niharika added the lengths of three sides of a rectangle and got 55 cm. Shreya added the lengths of three sides of the same rectangle and got 50 cm. What is the perimeter of the rectangle?

(A) 15 cm

(B) 20 cm

(C) 70 cm

(D) 300 cm

26. Two numbers are in the ratio 3 : 5. If 4 is added to both the numbers, their ratio changes to 5 : 7. The smaller number is

- (A) 2 (B) 6
(C) 10 (D) 16

27. The value of $\frac{(121)^{\frac{1}{2}} + (441)^{\frac{1}{2}}}{2^3 \times 2^0 + 2}$ is _____.

- (A) $\frac{8}{6}$ (B) $\frac{16}{5}$
(C) -3 (D) 2

28. How many tiles measuring 6 cm × 3 cm will be needed to fit in a square floor of a bathroom of side 72 cm?

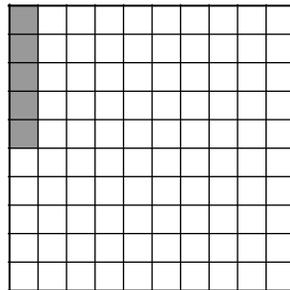
- (A) 288 (B) 280
(C) 216 (D) 432

29. Namita has x pens. Shiba has 2 times as many pens as Namita. Shiba gets 16 more pens from her sister. How many more pens does Shiba have as compared to Namita?



- (A) $2x - 16$ (B) $x + 16$
(C) $2x + 16$ (D) $x + 8$

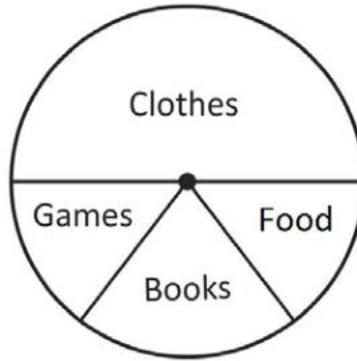
30. By which decimal number 0.0005 be divided to get the given decimal number?



- (A) 0.01 (B) 0.1
(C) 10 (D) 100

31. A man sells two bullocks for ₹ 7700 each, neither losing nor gaining in the deal. If he sold one bullock at a gain of 10%, the other bullock is sold at a loss of _____.

- (A) $8\frac{1}{2}\%$ (B) $7\frac{1}{3}\%$



On which items he spent half of the total amount?

- (A) Food and games (B) Clothes
(C) Games, books and food (D) Food

37. Naman bought 120 apples at ₹ 4 each. He sold 60% of the apples at ₹ 5 each and the remaining at ₹ 3.50 each. His _____ is _____ %.

- (A) Profit (B) Loss
(C) 7.5 (D) 10

38. Nishant studies for $5\frac{5}{8}$ hours daily. He devotes $4\frac{1}{2}$ hours of his time for Mathematics and Science. How much time does he devote for other subjects?

- (A) $1\frac{1}{4}$ hours (B) $1\frac{1}{8}$ hours
(C) $\frac{9}{8}$ hours (D) $\frac{5}{4}$ hours

39. Which of the following pairs show equivalent rational numbers?

- (A) $\frac{15}{30}$ and $\frac{1}{2}$ (B) $\frac{-4}{32}$ and $\frac{1}{8}$
(C) $\frac{5}{25}$ and $\frac{-9}{45}$ (D) $\frac{7}{15}$ and $\frac{21}{45}$

40. Which of the following can be the sides of a right-angled triangle?

- (A) 6 cm, 9 cm, 10 cm (B) 9 cm, 12 cm, 15 cm
(C) 5 cm, 12 cm, 13 cm (D) 4 cm, 5 cm, 7 cm

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