PM SHRI KENDRIYA VIDYALAYA GACHIBOWLI,GPRA CAMPUS,HYD-32

PRACTICE PAPER 04 (2023-24)

RATIONAL NUMBERS & PERIMETER AND AREA

SUBJECT: MATHEMATICS **MAX. MARKS : 40**

CLASS : VII **DURATION : 1½ hr**

General Instructions:

(i). **All** questions are compulsory.

(ii). This question paper contains 2**0** questions divided into five Sections A, B, C, D and E.

(iii). **Section A** comprises of **6 MCQs** of **1 mark** each. **Section B** comprises of **1 CCT question** of **4 marks** each which contains **4 MCQs**. **Section C** comprises of 3 questions of **2 marks** each. **Section D** comprises of 4 questions of **3 marks** each and **Section E** comprises of 3 questions of **4 marks** each.

SECTION – A

Questions 1 to 6 carry 1 mark each.

1. Find x such that $\frac{-3}{8}$ and $\frac{x}{-24}$ are equivalent rational numbers.

(a) 3 (b) 9 (c) 8 (d) none of these

2. Rewrite the rational number $\frac{24}{-72}$ in the simplest form.

(a) $\frac{12}{-36}$ (b) $\frac{6}{-18}$ (c) $\frac{1}{-3}$ (d) none of these

3. Find the area of a right triangle whose base is 3 cm, perpendicular is 2 cm and hypotenuse is 5 cm.

(a) 3 cm^2 (b) 7.5 cm^2 (c) 5 cm^2 (d) 6 cm

4. If the area of the triangle is 36 cm^2 and the height is 3 cm, the base of the triangle will be

(a) 12 cm (b) 39 cm (c) 108 cm (d) 24 cm

5. What will be the area of circular button of radius 7 cm

(a) 154 cm^2 (b) 49 cm^2 (c) 154 cm (d) 3.14 x 7 cm^2

6. Find x such that $\frac{13}{6} = \frac{-65}{x}$

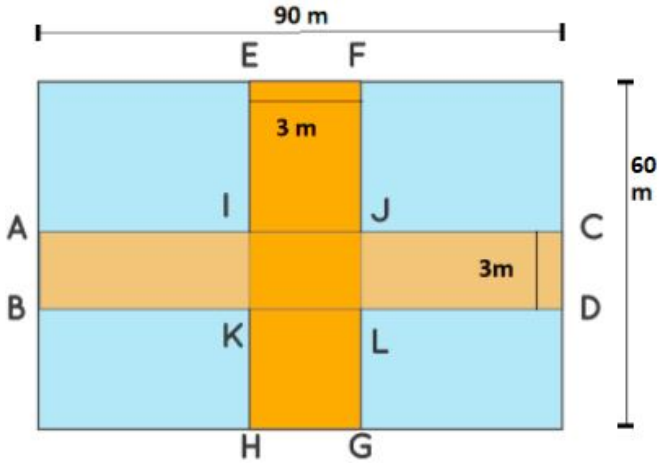
(a) –30 (b) 30 (c) –6 (d) none of these

SECTION – B(CCT Questions)

Questions 7 to 10 carry 1 mark each.

CCT Question

In Sudarshan Nagar colony, two cross roads, each of width 3 m, run at right angles through the centre of a rectangular park of length 90 m and breadth 60 m and parallel to its sides. Nikhil is a student of Class VII residing in Sudarshan Nagar colony. One day he has taken all the measurements and drawn a rough diagram of two cross roads as shown in below figure:



Answer the following questions based on the above information:

7. Find the Area of the rectangle ABCD
(a) 270 m^2 (b) 180 m^2 (c) 9 m^2 (d) 441 m^2

8. Find the Area of the rectangle EFGH
(a) 270 m^2 (b) 180 m^2 (c) 9 m^2 (d) 441 m^2

9. Find the Area of the Square KLMN
(a) 270 m^2 (b) 180 m^2 (c) 9 m^2 (d) 441 m^2

10. Find the area of the road.
(a) 270 m^2 (b) 180 m^2 (c) 9 m^2 (d) 441 m^2

SECTION – C

Questions 11 to 13 carry 2 marks each.

11. Find: $(i)\frac{2}{3}\times\frac{-7}{8}\ (ii)\frac{-6}{7}\times\frac{5}{7}$

12. Sudhanshu divides a circular disc of radius 7 cm in two equal parts. What is the perimeter of each semicircular shape disc?

13. Find base BC, if the area of the triangle ABC is 36 cm^2 and the height AD is 3 cm.

SECTION – D

Questions 14 to 17 carry 3 marks each.

14. Write the following rational numbers ion ascending order:
$(i)\frac{-3}{5},\frac{-2}{5},\frac{-1}{5}\quad (ii)\frac{-1}{3},\frac{-2}{9},\frac{-4}{3}\quad (iii)\frac{-3}{7},\frac{-3}{2},\frac{-3}{4}$

15. Find the sum: $(i)-2\frac{1}{3}+4\frac{3}{5}\quad (ii)\frac{-4}{5}\div(-3)\quad (iii)\frac{-6}{13}-\left(\frac{-7}{15}\right)$

16. Saima wants to put a lace on the edge of a circular table cover of diameter 1.5 m. Find the length of the lace required and also find its cost if one meter of the lace costs Rs 15. (Take $\pi = 3.14$)

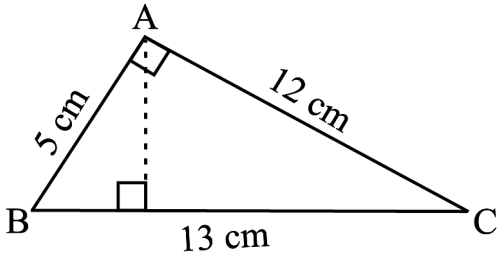
17. The two sides of the parallelogram ABCD are 6 cm and 4 cm. The height corresponding to the base CD is 3 cm. Find the (i) area of the parallelogram. (ii) the height corresponding to the base AD.

SECTION – E

Questions 18 to 20 carry 4 marks each.

18. Represent these numbers on the number line. $(i)\frac{7}{4}\quad (ii)\frac{-5}{6}\quad (iii)\frac{4}{7}\quad (iv)\frac{9}{4}$

19. ΔABC is right angled at A (see below figure). AD is perpendicular to BC. If AB = 5 cm, BC = 13 cm and AC = 12 cm, Find the area of ΔABC. Also find the length of AD.



20. Shazli took a wire of length 44 cm and bent it into the shape of a circle. Find the radius of that circle. Also find its area. If the same wire is bent into the shape of a square, what will be the length of each of its sides? Which figure encloses more area, the circle or the square?