KENDRIYA VIDYALAYA SANGATHAN, HYDERABAD REGION
SUMMATIVE ASSESSMENT – II

Class: VII   Max. Mark: 60

Subject: Maths   Duration: 2 ½ hours

Instructions

Answer all questions.

Section A : Q No. 1 to 8 are of multiple Choice type and carry 1 mark each.

Section B : Q No. 9 to 14 are short answer type and carry 2 marks each.

Section C : Q No.15 to 22 are short answer type and carry 3 marks each.

Section D : Q No. 23 to 26 are long answer type and carry 4 marks each.

Section A

1. If ΔART $\cong$ ΔPEN, then RT = _____ and ∠A = _____

(a) EN, ∠P   (b) ∠P , EN   (c) PE, ∠T   (d) PN, ∠N

2. Which of the following English alphabet has reflectional symmetry about a vertical mirror?

(a) B   (b) D   (c) V   (d) E

3. The ratio of 3km to 300m is

(a) 1 : 10   (b) 10 : 1   (c) 3 : 100   (d) 100 : 3

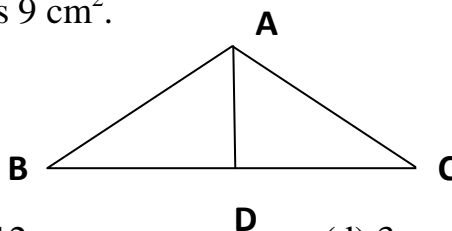4. The product of a rational number with its reciprocal is always

(a) 0   (b) infinite   (c) 1   (d) None

5. Which of the following is a binomial?

(a) $3x^2y$ (b) 2 + x   (c) 5x +6y - 3   (d) 7 mn

6. In Δ ABC, height AD = 3 cm. Its area is 9 cm^2.

   Then, its base BC is

(a) 6 cm.   (b) 9 cm.   (c) 12 cm.   (d) 3 cm.

7. The value of ($3^0 + 2^0$) x 5^0 is

(a) 1   (b) 25   (c) 0   (d) 2

8. When a ball is cut horizontally, its cross section is a _____.

a) Square   (b) Rectangle   (c) Circle   (d) Triangle

Section B

9. Express 1000 as product of powers of its prime factors.

10. Find the whole quantity, if 40% of it is 500km.

11. Find the value of: $\dfrac{-1}{8} \div \dfrac{3}{4}$

12. Draw 2 plane figures with more than one line of symmetry.

13. Find the Simple Interest on Rs.5000 for 3 years at the rate of 10% per annum.

(Or)

The cost price of a bag is Rs. 350. It is sold for a profit of Rs. 35. Find the profit percent.
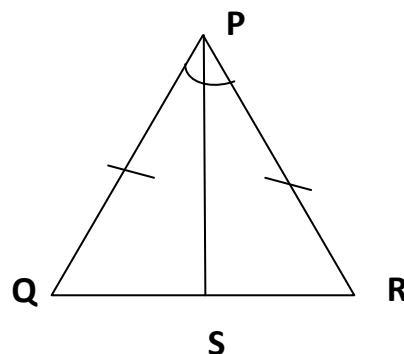
14.   Draw an oblique sketch of a cuboid.

Section C

15. In figure given PQ = PR and PS is the bisector of <QPR.

(i) State three pairs of equal parts in Triangles PSQ and PSR

(ii) Is Δ PSQ ≅ Δ PSR

16. The perimeter of a rectangular sheet is 100 cm. If the length is 35cm, find its breadth. Also find its area.

17. Arrange the following rational numbers in ascending order: $\dfrac{-3}{7} , \dfrac{-3}{2} , \dfrac{-3}{4}$

18. A gardener wants to fence a circular garden of diameter 21m. Find the length of the wire he needs to purchase and cost of it at the rate of Rs.4 per metre.
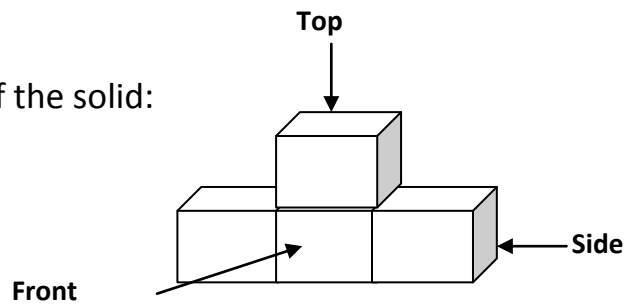
(Or)

Amit runs around a rectangular park which is 120m long and 80 m wide. Find the distance he covers in 3 rounds.

19. Simplify the expression $2(a^2 + ab) - ab$ and find its value if   a = 5 and b = 2.

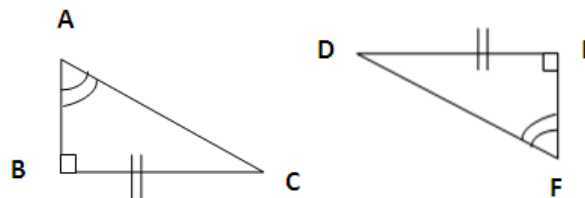20. Simplify: $\dfrac{3^5 \, X \, 10^5 \, X \, 25}{5^7 \, X \, 6^5}$.

21. Write the Oder of Rotation and angle of symmetry of (a) Square (b) Rectangle and (c) Equilateral Triangle.

22. Draw the Top, Side and Front view of the solid:

Section D

23. Explain why $\triangle ABC \cong \triangle FED$?

24. Selling price of a toy car is Rs. 480. If the profit made by shopkeeper is 20%, what is its cost price?

(Or)

The population of a city decreased from 25,000 to 24,500. Find the percentage of decrease.

25. A rectangular park is 45m long and 30m wide. A 2.5m wide path is constructed outside the park. Find the area of the path.

26. From the sum of $4 + 3x$ and $5 - 4x + 2x^2$, subtract the sum of
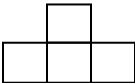 $3x^2 - 5x$ and $-x^2 + 2x + 5$

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SCORING KEY FOR COMMON SUMMATIVE ASSESSMENT – II

Class: VII   **Sub: Mathematics**

Q. No	Steps/Answers	Marks
1	(a)	1
2	(c)	1
3	(b)	1
4	(c)	1
5	(b)	1
6	(a)	1
7	(d)	1
8	(c)	1
9	Prime factorisation Writing $1000 = 2^3 \times 5^3$	1 1
10	40% of x = 500km. x = $\frac{500 \times 100}{40}$ x = 1250 km.	½ 1 ½
11	For writing $\frac{-1}{8} \times \frac{4}{3}$ Simplifying as $\frac{-1}{6}$	1 1
12	For drawing each figure with lines of symmetry -1mark	1 x 2 = 2
13	For writing the formula and correct substitution For finding the answer as : $\frac{5000 \times 3 \times 10}{100}$ = 1500 [**or**] For writing the formula and correct substitution For finding the answer as : $\frac{35}{350}$ x 100 = 10%	1 1 1 1
14	For neat drawing	2
15	For writing PQ = PR and <QPS = <RPS For writing PS = PS (common) (ii) Yes, Δ PSQ ≅ Δ PSR	1 1 1

Q. No	Steps/Answers	Marks
16	For writing formula 2 (l + b) = Perimeter	½
	For correct substitution 2 (35 + b) = 100	
	& finding 'b' value as b = 50 – 35 = 15 cm.	1
	For writing formula Area = (l x b)	½
	For correct substitution & and finding area as	1
	Area= 35 x 15 =525 cm^2	
17	For finding LCM as 7 x 4 = 28	1
	For finding the equivalent rational numbers as	
	$\frac{-12}{28}, \frac{-42}{28}, \frac{-21}{28}$	1
	$\frac{-42}{28} < \frac{-21}{28} < \frac{-12}{28}$	1
18	For writing the formula and correct substitution	1
	in π d or 2 π r	
	For finding the circumference as = 66 cm	1
	For finding the cost of fencing as 66 x 4 = Rs. 264	1
	[or]	
	For writing the formula & substituting as	
	2 (l + b) = 2 x (120 + 80)	1
	For finding the perimeter as 400 m.	1
	For finding the distance as 400 x 3 = 1200 m.	1
19	For simplification as $2a^2$ + ab	1
	Correct substitution	1
	Finding Value as $2(5^2)$ + 5x 2 = 60	1
20	$\frac{3^5 \ x \ (2 \ x \ 5)^5 \ x \ 5^2}{5^7 \ x \ (2 \ x \ 3)^5}$	1
	$\frac{3^{\cancel{5}} \ x \ \cancel{2^5} x \ 5^5 \ x \ 5^2}{5^7 \ x \ \cancel{2^5} \ x \ 3^{\cancel{5}}}$	1
	$\frac{5^{2+5}}{5^7} = 1$	1
21	Square – 4 – 90^0	1
	Rectangle – 2 – 180^0	1
	Equilateral Triangle – 3 - 60^0	1

Q. No	Steps/Answers	Marks
22	Correct drawing of each view – 1 mark Top – [ ][ ][ ] Side - [ ][ ] Front – [ ] [ ][ ][ ]	3 x 1 = 3
23	In the given triangles, < A = < F and < B = < E Therefore <C = <D < B = < E, side BC = side ED and <C = <D by ASA criterion, Δ ABC $\cong$ Δ FED.	1 2 1
24	Let the cost price be Rs.100 Profit % = 20, So, SP = 100 +20 = Rs.120 If 120 is SP, CP = 100 So, SP = 480 , CP = (480/120) x 100 = 400 [Or] For finding the decrease as 25000 -24500 = 500 Decrease percent formula and correct substitution Finding the result as 2%	2 2 1 2 1
25	Area of the park = 45 m x 30 m = 1350 sq. m Length of the outer rectangle = 45 + 2(2.5) = 50 m. Breadth = 30m + 2(2.5) = 35m. Area of the outer rectangle = 50 x 35 = 1750 sq.m. Area of the path = 1750 – 1350 = 400 sq.m.	1 1 1 1
26	For finding correct sum of expressions as $(4 + 3x) +(5 - 4x + 2x^2) = 9 - x + 2x^2$ $(3x^2 - 5x) + (-x^2 + 2x + 5)= 2x^2 - 3x +5$ For finding the difference as 4 +2x	 1 ½ 1 ½ 1