

KENDRIYA VIDYALAYA SANGATHAN (PATNA REGION)

SUMMATIVE ASSESSMENT -2 (,2015-2016)

CLASS VII MATHEMATICS BLUEPRINT

CHAPTER/TOPIC	M C Q (1)	V S A (2)	S A (3)	L A (4)	OTBA	TOTAL
CONGRUENCE OF TRIANGLES	2(2)	1(2)	–	1(4)	–	4(8)
COMPARING QUANTITIES	–	2(4)	1(3)	1(4)	–	4(11)
RATIONAL NUMBER	–	3(6)	1(3)	–	–	4(9)
PERIMETER AND AREA	–	–	2(6)	1(4)	–	3(10)
ALGEBRAIC EXPRESSIONS	2(2)	–	2(6)	–	–	4(8)
SYMMETRY	2(2)	–	–	–	–	2(2)
VISUALISING SOLID SHAPES	2(2)	–	–	–	–	2(2)
OTBA					1(10)	1(10)
TOTAL	8(8)	6(12)	6(18)	3(12)	1(10)	24(60)

KENDRIYA VIDYALAYA SANGATHAN (PATNA REGION)
SUMMATIVE ASSESSMENT-II, 2015-16
CLASS-VII
MATHEMATICS

TIME -2.30 HRS

MAX. MARKS-60

General instruction;

- (a) Attempt all questions
- (b) The question no.1-8 carry 1mark each.
- (c) The question no.9-14 carry 2 marks each
- (d) The question no.15-20 carry 3marks each
- (e) The question no. 21-23 carry 4 marks each
- (f) The question no.24 (OTBA) carry 10 marks

SECTION-A

- 1. Two line segments are congruent if-----
- 2. When we write $LA=LB$ we actually mean-----
- 3. One half of the sum of numbers x and y
- 4. Sum of numbers a and b subtracted from their product
- 5. What other name can you give to the line of symmetry of a circle?
- 6. Name any two figures that have both line symmetry and rotational symmetry.
- 7. Solid shapes are of-----dimensions
- 8. The corners of a solid shape are called its-----

SECTION B

- 9. Show that in an isosceles triangle, angles opposite to equal sides are equal.
- 10. In a computer lab, there are 3 computers for every 6 students. How many computers will be needed for 24 students?
- 11. Find the whole quantity if 8%of it is 40 liters
- 12. Which is greater in the following, $2/3$, $5/2$?

13. Find the sum $-9/10 + 22/15$

14. Write the following rational numbers in ascending order $-3/5, -2/5, -1/5$

SECTION-C

15. In a city 30% are females, 40% are males and remaining are children. What percent are children?

16. Find the value of $-1/8 \div 3/4$

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

18. If the circumference of a circular sheet is 154 m, find its radius. Also find the area of the sheet (Take $\pi=22/7$)

19. What should be added to $x^2 + xy + y^2$ to obtain $2x^2 + 3xy$?

20. If $a=2, b=-2$ find the value of $a^2 + ab + b^2$.

SECTION - D

21. I buy a T.V for Rs10000 and sell it at a profit of 20%. How much money do I get for it?

22. Find the cost of polishing a circular table top of a diameter 1.6 m if the rate of polishing is Rs15/m² (Take $\pi = 3.14$).

23. If $\triangle DEF \cong \triangle BCA$ write the parts of triangle BCA that correspond to

a) angle E.

b) EF.

c) angle F .

d) DF.

OTBA

THEME - NUTRITION

Answer the following questions on the basis of Abstract and data given:

1. What is modern nutrition? 2
2. How many items on Mc Donald's entire menu containing no sugar? 1
3. Give the daily recommended target intake by the age of children 1-3 years. 1
4. Create a bar graph to represent any five whole grains nutrition facts in the form of protein based on the given chart. 3
5. Mark a bar graph to represent any five fruit nutrition facts in the form of iron percentage based on the given chart. 3

OR

THEME - BMI

Answer the following questions on the basis of Abstract and data given:

1. What is BMI? 2
2. Write the ideal weight of a man and a woman for the height of 165 cm on the facts based on the given chart. 2
3. Given the BMI ranges for adults of weight status :-
Under weight, overweight, normal or healthy weight and obese 3
4. What are 6 main health consequences of obesity for adults? 3

$$50=35+B \quad 2$$

$$B=50-35=15$$

$$\text{Area of rectangular sheet} = L \times B = 35 \times 15 = 525 \text{ c.m}^2 \quad 1$$

18. Circumference of circle =154

$$2\pi r = 154 \quad 1$$

$$2 \times \frac{22}{7} \times r = 154$$

$$r = \frac{49}{2} \quad 1$$

Area of a circle = πr^2

$$= \frac{22}{7} \times \frac{49}{2} \times \frac{49}{2} = \frac{3773}{2} = 1886.5 \text{ c.m}^2$$

$$19. \text{ Required expression} = (2x^2 + 3xy) - (x^2 + xy + y^2) \quad 1$$

$$= 2x^2 + 3xy - x^2 - xy - y^2 \quad 1$$

$$= x^2 - y^2 + 2xy \quad 1$$

$$20. (2)^2 + 2 \times -2 + (-2)^2 \quad 1$$

$$= 4 - 4 + 4 \quad 1$$

$$= 8 - 4 = 4 \quad 1$$

21. C.P of the T.V =Rs 10000

$$\text{Profit} = 20\% \text{ of } 10000 \quad 1$$

$$= 2000 \quad 1.5$$

$$S.P = C.P + \text{Profit}$$

$$10000 + 2000 = 12000 \qquad 1.5$$

22. Radius = D/2

$$\text{Area of circular table top} = \pi r^2 \qquad 1$$

$$= 3.14 \times (1.6/2)^2 \qquad 1$$

$$= 1.57 \times 0.8 \times 1.6 \text{ m}^2 \qquad 1$$

$$\text{Cost of polishing} = 15 \times 1.57 \times 0.8 \times 1.6$$

$$= \text{Rs}30.144 \qquad 1$$

23. a) $\angle E < \angle C$ b) $EF = AC$ c) $\angle F < \angle A$ d) $DF = AB$

24. **Theme – Nutrition**

1. Modern nutrition research has moved on to concepts of functional foods, molecular nutrition and nutritional based health. 2
2. 7 items 1
3. 24 gms 1
4. Create a bar graph by taking 5 fruits on horizontal axis and percentage of protein facts present in that fruits on vertical axis. 3
5. Make a bar graph by taking any 5 whole grains on x-axis and percentage of iron facts on y-axis 3

OR

Theme – BMI

1. BMI is a person's weight in kilograms divided by the square of height in metres.
2. Man's weight = 59 – 72 kg and woman's weight = 53 – 70 kg
3. Following is the BMI of adults of various weight status :

Underweight	Below 18.5
Overweight	18.5-24.9
Normal/healthy weight	25.0-29.9
4. 6 man consequences are : -
 - a. High blood pressure
 - b. Type 2 diabetes

- c. Coronary heart disease
- d. Stroke
- e. Gallbladder disease
- f. osteoarthritis