GRADE – VIII MODEL PAPER 2017

MATHEMATICS

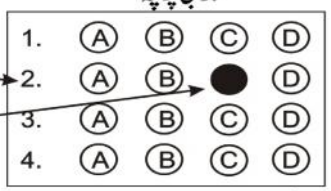
Section A: Multiple Choice Questions
Marks: 40 Time: 50 Minutes

Roll No						

سوالیہ پرچہ

Q.2 Choose the correct sentence.
A. She written a letter.
B. She is write a letter.
C. She wrote a letter.
D. She is written a letter.

جوابی پرچہ



اوپر دی گئی مثال میں سوال نمبر 2 کا درست جواب C ہے جس کے لئے جوابی پرچے میں سوال نمبر 2 کے سامنے C کا دائرہ سیاہ رنگ میں بھرا ہوا ہے۔

ہدایات

1. ہر سوال کے چار ممکنہ جوابات دیئے گئے ہیں۔ ان میں سے صرف ایک جواب درست ہے۔ جوابات کے لئے دیئے گئے علیحدہ جوابی پرچے پر متعلقہ دائرے میں سیاہ رنگ بھریں۔ سوالیہ پرچے پر جوابات کے نشان نہ لگائیں۔
2. جواب میں ایک سے زیادہ دائرے بھرنے سے جواب غلط تصور ہوگا۔
3. سوالیہ پرچے پر سوال نمبر مثلاً 1, 2, 3, 4, 5... اور اس کے صحیح جواب مثلاً D, C, B, A کو نوٹ کریں اور اس کے بعد جوابی پرچے پر اُسی سوال نمبر کے سامنے صحیح جواب کا دائرہ بھریں۔

Q1. If $A=\{a,b,c,d\}$ then the improper subset of A is

A. ¤
B. $\{¤\}$
C. $\{a,b,c\}$
D. $\{a,b,c,d\}$

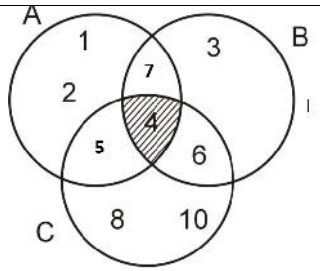
Q2. The set of Prime Numbers in the given set is

A. $\{0,1,2\}$
B. $\{4,6,8\}$
C. $\{5,7,9\}$
D. $\{5,7,11\}$

Q3. $(A\cap B)' =$ _____

A. $(A\cup B)'$
B. $A'\cup B'$
C. $A'\cup B$
D. $A\cup B'$

Q4.



The shaded region in the given Venn diagram represents

A. $A\cap B$
B. $A\cap C$
C. $A\cup B\cup C$
D. $A\cap B\cap C$

Q5. Which of the following is correct?

A. $\frac{1}{3^3} > \frac{1}{9^3}$
B. $\frac{1}{3^3} \geq \frac{1}{9^3}$
C. $\frac{1}{9^3} < \frac{1}{3^3}$
D. $\frac{1}{9^3} \leq \frac{1}{3^3}$

Q6. The digits in base 2 system are

A. 0, 1
B. 0, 2
C. 1, 2
D. 0, 1, 2

Q7.	$(13)_2 + (53)_5 =$ A. 13 B. 15 C. 33 D. 35	**Q8.**	Type of deposit which can be drawn on expiry of a specific period is A. Saving Bank Deposit. B. Current Deposit. C. Fixed Deposit. D. Commercial Deposit.
Q9.	After receiving funds an instrument is issued by the bank to the customer. It is called A. cheque. B. pay order. C. demand draft. D. credit card.	**Q10.**	A written agreement by which a renter can use property on rent for a specific period is called A. over draft. B. running finance. C. demand finance. D. leasing.
Q11.	Purchase price = Rs. 12 Sale price = Rs. 10 Loss = Rs. 2 Then, Loss% = A. $\frac{2}{10}\times 100$ B. $\frac{2}{12}\times 100$ C. $\frac{2}{12}\times 10$ D. $\frac{10}{12}\times 100$	**Q12.**	The degree of $8x^2y^3 + 4x^2y^2 + xy^2 + x^2$ is A. 5 B. 4 C. 3 D. 2
Q13.	$xyz + yz + x + 1$ is A. Zero Variable Polynomial. B. One Variable Polynomial. C. Two Variable Polynomial. D. Three Variable Polynomial.	**Q14.**	Which of the following polynomials has degree 3? A. $x + y + z + 1$ B. $3x + 2y + z$ C. $xy + yz + zx$ D. $xy + xyz + 1$
Q15.	$(104)^2 =$ A. $(100)^2 + 2(100)(16) + (4)^2$ B. $(100)^2 + 2(100)(4) + (4)^2$ C. $(100)^2 + 2(10)(16) + (4)^2$ D. $(100)^2 + 2(10)(4) + (4)^2$	**Q16.**	Suppose Ali's age is x years and Akbar's age is y years and their age difference is 45 years. It can be expressed in the linear equation as: A. $x - y = 45$ B. $x^2 - y^2 = 45$ C. $x^3 - y^3 = 45$ D. $x^2y - y^2x = 45$

Q17. If $x + y = 6$ and $x - y = 4$, then x is equal to

A. -5
B. 5
C. -10
D. 10

Q18. If $x + 2y = 3$
$x + y = 4$
Then y =

A. -1
B. 1
C. -5
D. 5

Q19. If $3t = x$ and $3at = y$, then elimination of 't' by substitution method gives

A. $\frac{y}{x} = a$
B. $\frac{x}{y} = a$
C. $\frac{a}{x} = y$
D. $\frac{x}{y} = 1$

Q20. A ⟷
B ⟷

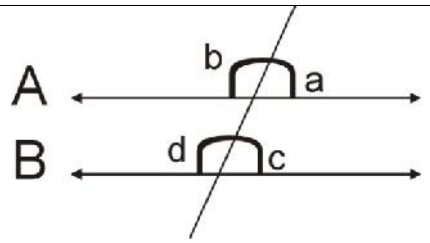
In the figure A and B are

A. vertical lines.
B. parallel lines.
C. non-parallel lines.
D. perpendicular lines.

Q21. In regular hexagon each angle is equal to

A. 90^0
B. 108^0
C. 120^0
D. 135^0

Q22.



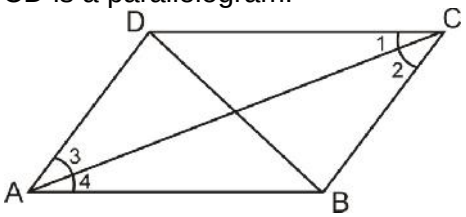
In the given figure, if $A \parallel B$, then

A. $\angle a = \angle b$
B. $\angle c = \angle d$
C. $\angle a = \angle c$
D. $\angle a = \angle d$

Q23. All of them are polygon **EXCEPT:**

A. Triangle
B. Rectangle
C. Circle
D. Square

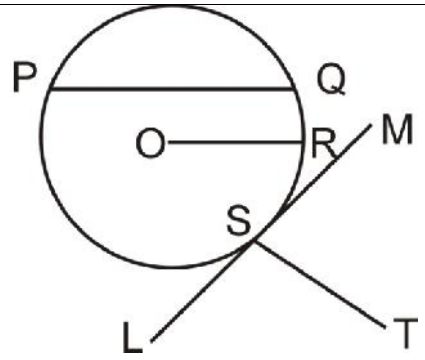
Q24. ABCD is a parallelogram.



Which of the following pairs of angles is equal?

A. $\angle 1 \text{ and } \angle 2$
B. $\angle 3 \text{ and } \angle 4$
C. $\angle 1 \text{ and } \angle 3$
D. $\angle 1 \text{ and } \angle 4$

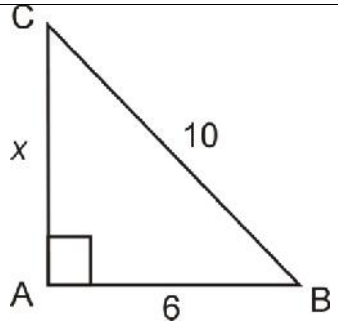
Q25.



Which of the following is chord of a circle?

A. $\overline{OR}$
B. $\overline{LM}$
C. $\overline{ST}$
D. $\overline{PQ}$

Q26.



The value of x in the above figure is

A. 4
B. 8
C. 12
D. 16

Q27. If a = 6cm, b = 7cm, c = 9cm, then the area of the triangle is

A. 9.4 cm^2
B. 10.5 cm^2
C. 14.8 cm^2
D. 20.97 cm^2

Q28. The surface area of a sphere with radius 6cm is

A. 3168.0 cm^2
B. 2715.4 cm^2
C. 452.6 cm^2
D. 75.4 cm^2

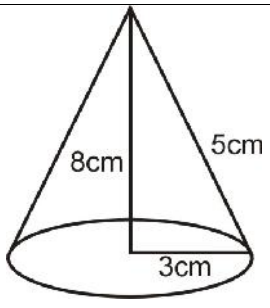
Q29. The parts of the prepositions or theorem are

A. 2
B. 3
C. 4
D. 5

Q30. Volume of a cone is equal to

A. $®r\left(r+\ell\right)$
B. $\frac{1}{3}®r^2h$
C. $\frac{4}{3}®r^3$
D. $4®r^2$

Q31.

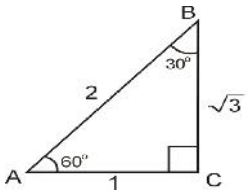


The volume of the given cone will be

A. 37.7 cm^3
B. 75.4 cm^3
C. 113.0 cm^3
D. 192.0 cm^3

Q32. "Every even number is divisible by 2." The given statement represents

A. a corollary.
B. an axiom.
C. a postulate.
D. a theorem.

Q33.	An axiom is the type of assumptions which is related to A. numbers. B. geometrical figures. C. corollary. D. angles.	**Q34.**	Cot 30^o = A. $\frac{1}{2}$ B. $\frac{1}{\sqrt{3}}$ C. $\frac{\sqrt{3}}{1}$ D. $\frac{2}{1}$ 
Q35.	Which of the following has value 1? A. $\text{Sin}\,45^\circ$ B. $\text{Cos}\,45^\circ$ C. $\text{Tan}\,45^\circ$ D. $\text{Sec}\,45^\circ$	**Q36.**	$2Sin30^o + \sqrt{2}Cos45^o =$ A. $\frac{2}{\sqrt{2}}$ B. 2 C. $\frac{1}{\sqrt{2}}$ D. 1
Q37.	$Cos(90^o - \_\_) =$ A. $\text{Sec}\_\_$ B. $\text{Cosec}\_\_$ C. $\text{Sin}\_\_$ D. $\text{Tan}\_\_$	**Q38.**	19, 21, 20, 18, 23, 19, 20, 18, 19, 20, 19 The frequency of 19 in the given data is A. 1 B. 2 C. 3 D. 4
Q39.	Mode of 7, 8, 11, 10, 8, 9, 13 is A. 8 B. 9 C. 10 D. 13	**Q40**	The number $\sqrt{5}$ is A. a rational number. B. a whole number. C. an irrational number. D. an odd number.

GRADE – VIII MODEL PAPER 2017

MATHEMATICS

Section B: Constructed Response Questions Time: 2 hours 10 minutes Marks: 60	Roll No.						

ہدایات:

1. ہر سوال کا جواب دینا ضروری ہے۔ **2.** جواب دینے سے پہلے سوال کو غور سے پڑھیں۔ **3.** سوال کا جواب دی گئی جگہ پر تحریر کریں۔

Q1. If (Total 6 Marks)

$$A = \{2,4,6,8\}$$
$$B = \{3,5,7,9\}$$
$$C = \{1,2,3,4,5\}$$

then prove that

$$A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$$

Q2. **If** $\bigcup = \{x \mid x \in w \text{ and } 0 \le x \le 7\}$ (Total 6 Marks)

$A = \{x \mid x \in z \text{ and } 2 \le x \le 5\}$

$B = \{x \mid x \in z \text{ and } 4 \le x \le 7\}$

then prove that $(A \cap B)' = A' \cup B'$

Q3. Find the values of (Total 6 Marks)

i. $\sqrt[3]{216}$ ii. $\left(\frac{1}{5}\right)^3$

Q4. Ali's monthly salary is Rs. 8000. Calculate his income tax at the rate of 5% and the rebate is Rs. 80,000**.** (Total 6 Marks)

Q5. Find the value of $x^2 + \frac{1}{x^2}$ when $x + \frac{1}{x} = -12$ (Total 6 Marks)

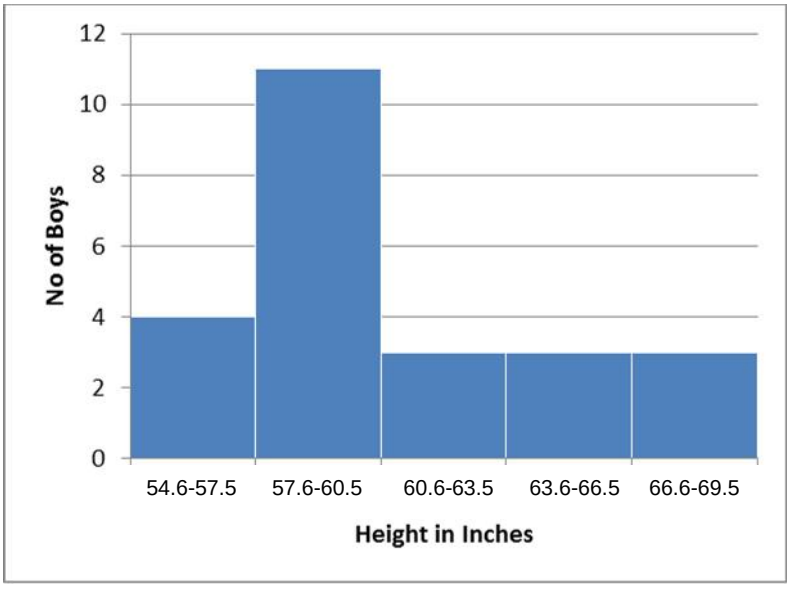
Q6. Ali and Kamal together get pocket money of Rs.150 daily. If Ali gets Rs. 50 more than Kamal then how much pocket money Ali and Kamal gets daily. (Total 6 Marks)

Q7. Construct a right angled triangle ABC, where $\angle B = 90^o$, $\overline{BC} = 4cm$ and hypotenuse $\overline{AC} = 5cm$. Also write steps of construction. (Total 6 Marks)

Q8. Prove: *If two sides of a triangle are congruent then angles opposite to these sides are congruent.* (Total 6 Marks)

Q9. The angle from a point on level ground 40 m from the foot of a tower is 45 degree. What is the height of the tower? (Total 6 Marks)

Q10. The given histogram shows height (in inches) of different boys. (Total 6 Marks)



1. What is the total number of boys shown in the histogram?
2. How many boys are with height in the range of 60.6 – 63.5 inches?
3. What is the maximum height of the boys?
4. What is the class interval of the given data? Write down the range of the given data.