ITL Public School

Summative Assessment 1(2015-16)

Mathematics – Set A

Date: 21/08/2015 **Class: VII**

Time: 3 hrs **M. M: 90**

General Instructions:

1. *Read the question paper carefully and answer legibly.*
2. *All questions are compulsory.*
3. *The question paper consist of 31 questions divided into four sections A,B,C and D*
4. *Section A comprises of 4 question of 1 mark each, section B comprises of 6 questions of 2 marks each, Section C comprises of 10 questions of 3 marks each and Section D comprises of 11 questions of 4 marks each*
5. *Use of calculators is not permitted.*

Section – A

Q1. Find the complement of 75º. 1

Q2. In ΔPQR and ΔSTU, PQ = ST, QR = TU and ∠Q = ∠T. Name the congruence criterion by which the two triangles will be congruent. 1

Q3. Write a pair of negative integers whose difference is -8. 1

Q4. Compare: 1.05×10^5 and 1.5×10^4 1

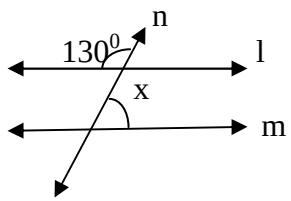
Section – B

Q5. Solve $5l - 3 = 12$. 2

Q6. a) Express 235.5223 in the standard form. 2
b) To what power (-3) should be raised to get -27?

Q7. If ΔPQR ≅ ΔXYZ, write all the corresponding sides and angles of both the triangles which will be equal. 2

Q8. Find the value of *x*. if ***l*** || ***m*** 2



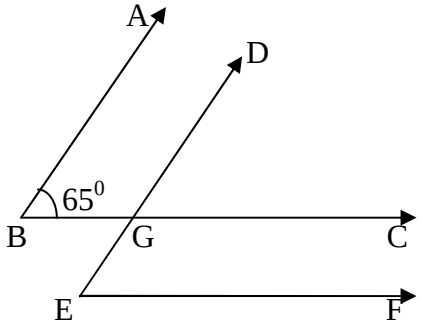
Q9. Shubham withdraws Rs. 7000 from his bank account in which he deposited Rs.8,500 the previous week. If withdrawal of amount from the account is represented by a negative integer, then how will you represent the amount deposited? Find the balance in Shubham's account after withdrawal. 2

Q10. Find 3 rational numbers between $\frac{-2}{3}$ and $\frac{-1}{7}$. 2

Section – C

Q11. In the given figure the arms of two angles are parallel. If $\angle ABC = 65^0$ then find the 3

$\angle DGC$ and $\angle DEF$.



Q12. The perimeter of a triangle is 72cm and the lengths of the sides are in the ratio 2:3:4. Find the lengths of the three sides. 3

Q13. Simplify using laws of exponents:

a) $(-1)^{201} \times (-3)^4$ 1 ½

b) $[2^2]^3$ 1 ½

Q14. In an isosceles ΔABC, in which AB = AC, AD is the median to the side BC. 3
Is Δ ADB ≅ Δ ADC ? Give reasons to support your answer.

Q15. Anvesha thinks of a number. If she takes 5 away from $\frac{3}{2}$ of that number, the result is 16. Find the number. 3

Q16. In a class of 35 students, $\frac{1}{5}$ of the total number of students like to study English, $\frac{2}{5}$ of the total number like to study Mathematics and the remaining students like to study Science. 3

a) How many students like to study English?
b) How many students like to study Science?

Q17. After simplifying put appropriate sign in the blank. 3

39 + (-21) – 18 ☐ 39 – (-21) + (-18)

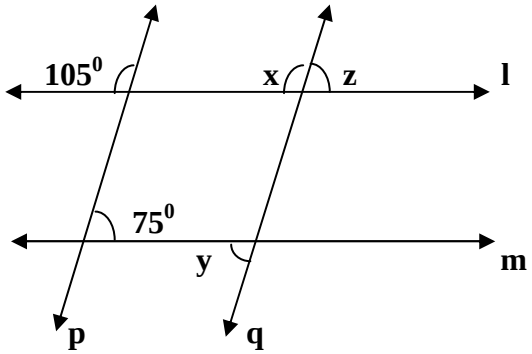
Q18. Ranbir's father's age is 4 years more than 4 times Ranbir's age. Find Ranbir's age, if his father is 44 years old. 3

Q19. 3

a) Arrange the following in ascending order : $\frac{-2}{7}, \frac{-2}{3}, \frac{-2}{5}$

b) Represent $\frac{-7}{3}$ on the number line.

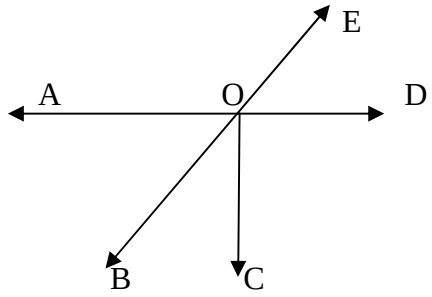
Q20. Find the value of x, y, z if $l \parallel m$ and $p \parallel q$. 3



Section – D

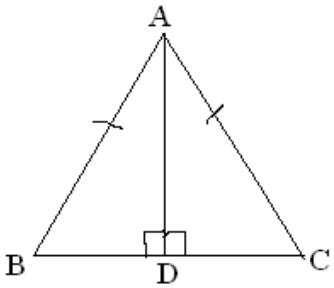
Q21. Name the following pairs of angles : 4

a) Vertically opposite angles.
b) Adjacent complementary angles.
c) Linear pair.
d) Equal supplementary angles.



Q22. ABC is an isosceles triangle with AB = AC and AD is one of its altitudes. 4

a) State the three pairs of equal parts in ΔADB and ΔADC.
b) Is ΔADB ≅ ΔADC? Give reason.
c) Is BD = CD? Give reason.
d) Is ∠BAD = ∠CAD? Give reason.



Q23. a) Each side of a regular polygon is 4.6cm in length. The perimeter of the polygon is 23cm. Find the number of sides of the polygon. 1 ½

b) How much less is 300.5 km than 405.7 km? 2 ½

Q24. Simplify using laws of exponents: $\frac{343 \times 3^3 \times 64}{6^2 \times 2^4 \times 7}$ (Also mention the laws used) 4

Q25. A certain freezing process requires that room temperature be lowered from 40ºC at the rate of 5ºC every hour. Find the room temperature 9 hours after the process begins. 4

Q26. In a class test containing 18 questions, 5 marks are given for every correct answer, (-2) marks are given for every incorrect answer and zero for not attempting any question. 2 + 2

a) Garima attempts all questions but only 12 of her answers are correct. What will be her score?
b) One of her friends attempted 11 questions but gets only 6 answers correct. What will be her score?

Q27. Find the value of :

a) $\left[\frac{9}{2} \times \left(\frac{-7}{4}\right)\right] + \left[(-4) \div \frac{2}{3}\right]$ 2

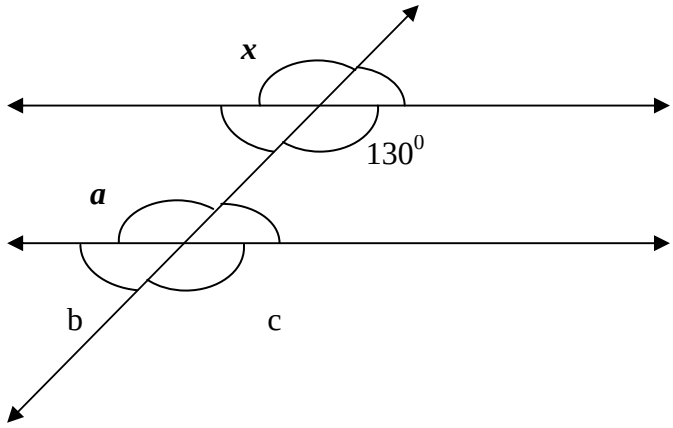
b) $\left[\frac{5}{63} - \left(\frac{-6}{21}\right)\right] \div \left[\frac{5}{3} + \frac{3}{5}\right]$ 2

Q28. Simplify using laws of exponents: (Also mention the laws used)

a) $\frac{a^2 \times a^3 \times b^3 \times b^4}{a^5 \times b^2}$ 3

b) $2^0 \times 3^0 \times 4^0$ 1

Q29. In the given figure, line ***l*** || ***m*** and ***n*** is transversal. Find the value of ***x, a, b and c .*** 4



Q30. a) Seema reads $\frac{1}{3}$ part of a book in 1 hour. How much part of the book will she read in $1\frac{2}{3}$ hours? 1.5

b) If Sanchit finishes the same book in $1\frac{3}{4}$ hours. How much part of the book he would have read in 1 hour? 1.5

c) Who read the book faster? 1

Q31. The students of class VII of a school decided to plant trees in the school. Some of the trees were fruit trees. The numbers of non-fruit trees were 5 more than 2 times the number of fruit trees. Find the number of fruit trees planted if they planted 75 non-fruit trees. 4
What value do you learn from this?