Summative Assessment

Maths Class-VII

Duration: 2hr45 min   **MM: 80**

General Instructions:

- There are three Sections A, B and C.
- Question 1-10 carry two marks each.
- Question 11-20 carry three marks each.
- Question 21-26 carry five marks each.

Section-A

Q1.   Put > , < or = in the box to make the statement true(also show the working) :
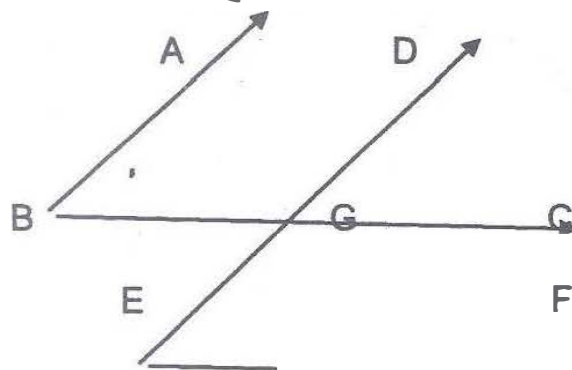
-   231 + 79 + 51 $\boxed{}$ - 399 + 159 +81

Q2.   Express the following in the usual form:

a) 7.54×10^6 b) 9.32×10^{-4}

Q3. Suman studies for $5\frac{2}{3}$ hours daily. She devotes $2\frac{4}{5}$ hours of her time for Science and Mathematics. How much time does she devote for other subjects?

Q4.   In the given figure, the arms of two angles are parallel. If $\angle ABC = 65^0$, then find

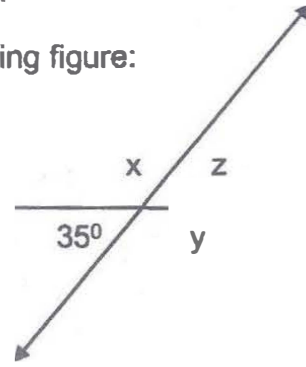i) $\angle DGC$ and   ii) $\angle DEF$

Q5. $\frac{20}{3}$ litres milk is distributed among 10 persons. How much milk would one person get?

Q6.   Each side of a regular polygon is 2.5 cm in length. The perimeter of the polygon is 12.5 cm.How many sides does the polygon have?.

Q7.   a) Express $\frac{136}{-254}$ in its standard form.

b) Draw a number line to represent $\dfrac{-7}{4}$ on it.

Q8. Find the measure of x , y and z in the following figure:

35^0 x z y

Q9. a) Solve : $\dfrac{-3}{5} - \left(\dfrac{-9}{11}\right)$

b) Divide : $-7\dfrac{1}{5}$ by $9\dfrac{1}{5}$

Q10. Find – 49 X 18 using distributive property.

Section –B

11. Verify the following:

$(-15) \times \left[\,(-7)-(-1)\,\right] = (-15) \times (-7) - (-15) \times (-1)$

Q12. Find six rational numbers between $\dfrac{-4}{5}$ and $\dfrac{-5}{3}$.

Q13. In a class of 40 students $\dfrac{1}{5}$ of the total number of students like to study English, $\dfrac{2}{5}$ of the total number like to study Mathematics and the remaining students like to study Science.
a) How many students like to study English?
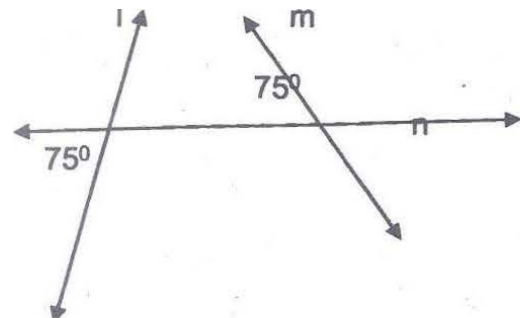b) How many students like to study Mathematics ?
c) What fraction of the total number of students like to study Science ?

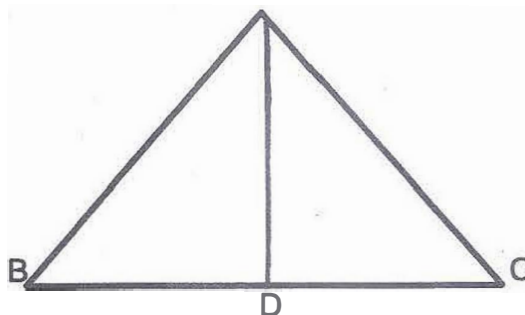Q14. Using laws of exponents, simplify the following:
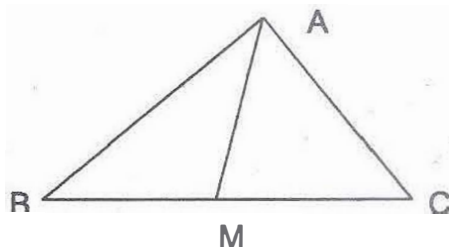$\dfrac{12^4 \times 9^3 \times 4}{6^3 \times 8^2 \times 27}$

Q15. Is l parallel to m ? Justify.

l m 75^0 75^0 n

Q16. A tree is broken at a height of 5 m from the ground and its top touches the ground at a distance of 12m from the base of the tree .Find the original height of the tree.

Q17. In the given figure,AB = AC and D is the midpoint of BC. Prove that
   i) $\triangle$ ADB $\cong$ $\triangle$ ADC
   ii) $\angle B = \angle C$

**Q18.** AM is the median of a triangle ABC. Is AB+BC+CA > 2AM?

Q19. Express 135× 375 as a product of prime factors only in exponential form.

Q20. Reena was eating a cake. She had eaten one-third of the cake , when her cousins came in.She divided the remaining cake equally and gave them.What fraction of cake did each cousin get? What value is depicted by Reena?
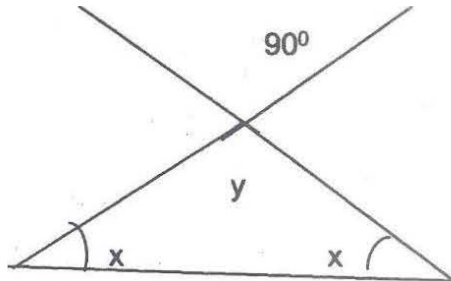
Section-C

Q21. Michael finished colouring a picture in $\frac{7}{12}$ hour. Vaibhav finished colouring the same picture in $\frac{3}{4}$ hour. Who worked longer? By what fraction was it longer?

Q22. i) Find the value of : $(-3)^3 \times (-5)^2$

   ii) Find the value of x if
      $7^{2x+1} \div 49 = 7$

Q23. Find the value of unknown angles x and y in figure (i) and (ii).
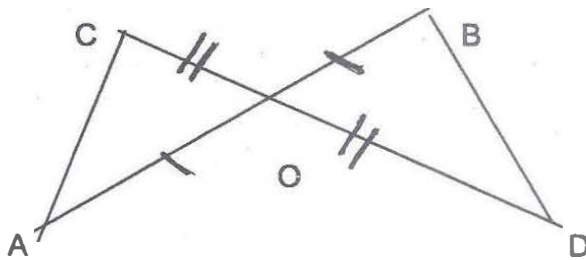
i)
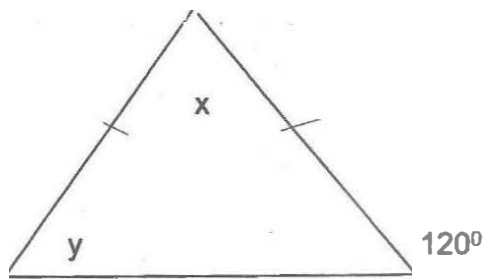
ii)

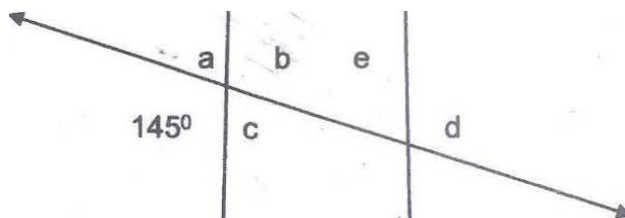Q24. In the given figure AB and CD bisect each other at O.Prove that:
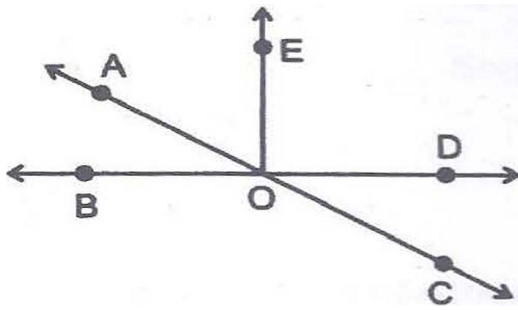
△ AOC ≅ △ BOD

Q25. An elevator descends into a mine shaft at the rate of 6 m / min. If the

descent starts from 10 m above the ground level, how long will it take to reach

– 350m.

Q26. In the given figure p is parallel to q.Find the unknown angles.

p   q

OR

In the given figure name a pair of each:

i)   Vertically opposite angles.

ii)   Equal supplementary angles.

iii) Adjacent complement angles.

iv)   Unequal supplementary angles.

v)   Adjacent angles that do not form a linear pair.