SA-I (CLASS-VII) 9/2012

SUBJECT : MATHEMATICS

Time : 3 hrs. **M.M. : 80**

General Instructions :

(i) All questions are compulsory.

(ii) Read all questions very carefully.

(iii) Questions 1 to 10 carry one mark each.

(iv) Questions 11 to 18 carry 2 marks each.

(v) Questions 19 to 28 carry 3 marks each.

(vi) Questions 29 to 34 carry 4 marks each.

Q1. Find $[(-16) \div 4] \div 2$

Q2. Find the sum of (-23) and its additive inverse.

Q3. What is the complement angle of 70°?

Q4. Reduce $\frac{-22}{55}$ to the standard form.

Q5. Find the area of a square whose side is 12cm.

Q6. Calculate the product of $\frac{-5}{9}$ and its reciprocal.

Q7. Draw the net of a square pyramid.

Q8. Draw the top view of

Q9. Calculate the circumference of a circle whose radius is 7cm.

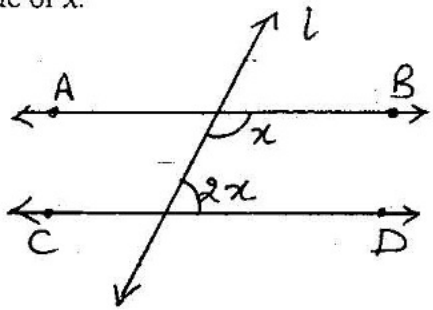
Q10. Three students were asked to write the equivalent fraction of the same fraction. Whose fraction is not equivalent to others?

Prince	Gaurav	Abhay
$\frac{5}{10}$	$\frac{2}{4}$	$\frac{14}{7}$

Q11. Represent a rational number $\frac{-5}{8}$ on a number line.

Q12. A CNG car runs 26km using 1 litre of gas. Calculate the distance covered by the car in $5\frac{3}{4}$ litre of gas.

Q13. In the given figure AB ∥ CD and 'l' is the transversal, find the value of x.



Q14. What cross section do you get when you give a (i) vertical cut (ii) horizontal cut to an ice cream cone?

Q15. Is it possible to have a triangle whose sides are 5cm, 3cm and 4cm?

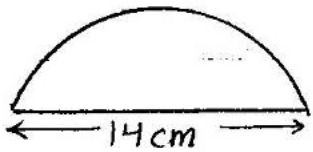
Q16. Write down a pair of integers whose

(i) sum is 5

(ii) difference is (-3)

Q17. Find the area of a parallelogram whose base is 8cm and height is 3.5cm.

Q18. Calculate the perimeter of the given figure including the diameter.



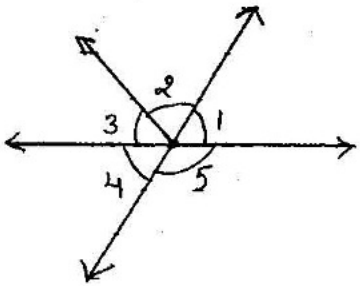
Q19. Express 10cm in m and km.

Q20. In a quiz competition 5 marks were given for every correct answer and (-3) marks were given for every wrong answer. Find the net score of

(i) Sunil if he gets 20 correct and 6 wrong answers.

(ii) Rachna if she gets 10 correct and 12 wrong answers.

Q21. Identify the following angles from the adjacent figure.



(i) A linear pair.

(ii) A pair of vertically opposite angles

(iii) A pair of adjacent angles

Q22. A pole is broken at a height of 12m from the gound and its top touches the ground at a distance of 5m from the base of the pole. Find the original height of the pole.

Q23. Multiply and reduce it to the lowest form

(i) $16 \times \frac{5}{2}$ (ii) $4\frac{2}{7} \times 21$

Q24. Find four rational numbers between $\frac{-2}{7}$ and $\frac{-1}{10}$

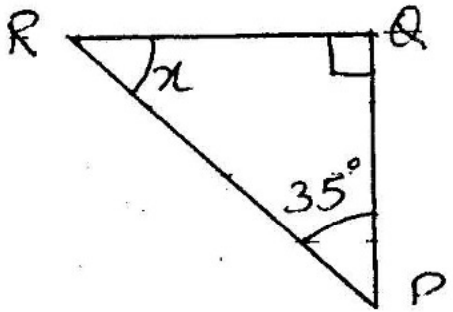
Q25. How many times a wheel of radius 21cm must rotate to go 924m? $\left(\text{Use } \pi = \frac{22}{7}\right)$

Q26. (i) Find the product using suitable property

$56 \times (-128) + (-128) \times 44$

(ii) Calculate $39 + (-24) + (-10)$

Q27. Find the value of 'x' in the figure given below.



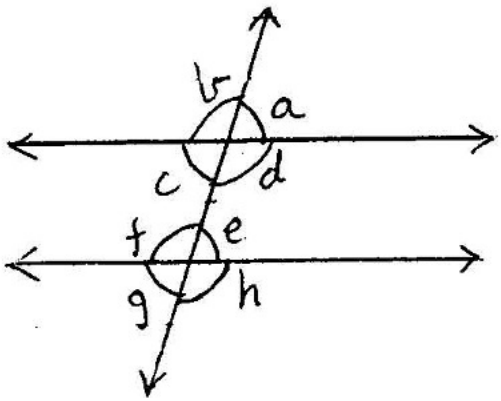
Q28. Three cubes each with side 4cm are placed side by side. What would be the dimensions of resulting figure? Also name the figure.

Q29. (i) Verify that

$a \div (b + c) \neq (a \div b) + (a \div c)$ for $a = -10, b = 1, c = 1$

(ii) Find $(-1) \times (-2) \times (-3) \times (-4)$

Q30. In the following figure if $a = 65°$, find the measure of remaining angles by giving suitable reasons.



Q31. (i) Arrange the following in ascending order

$$\frac{2}{9}, \frac{2}{3}, \frac{8}{21}$$

(ii) Find $\frac{4}{5}$ of 35

Q32. What is the breadth of a rectangle whose length is 8cm and diagonal is 10cm?

Q33. Calculate :

(i) $-2\frac{1}{3} + 4\frac{3}{5}$ (ii) $\left(\frac{-7}{15}\right) \div \left(\frac{-28}{5}\right)$

Q34. Two crossroads each of width 3m run at right angles through the centre of a rectangular park of length 60m and breadth 33m and parallel to its sides. Find the area of the crossroads.