CBSE Sample Paper Class 7 Maths Half Yearly Set 8

SUBJECT: MATHEMATICS CLASS : VII **MAX. MARKS : 80**
DURATION : 3 HRS

General Instructions:

(i). **All** questions are compulsory.
(ii). This question paper contains 4**0** questions divided into four Sections A, B, C and D.
(iii). **Section A** comprises of 20 questions of **1 mark** each. **Section B** comprises of 6 questions of **2 marks** each. **Section C** comprises of 8 questions of **3 marks** each and **Section D** comprises of 6 questions of **4 marks** each.
(iv). There is no overall choice. However, an internal choice has been provided in two questions of 2 marks each, two questions of 3 marks each and two questions of 4 marks each. You have to attempt only one of the alternatives in all such questions.
(v). Use of Calculators is not permitted

SECTION – A

Questions 1 to 20 carry 1 mark each.

1. The acute angles of right triangle are in the ratio 2 : 1. Find the measure of each of these angles.
(a) 55^0 and 35^0 (b) 60^0 and 30^0 (c) 50^0 and 40^0 (d) 45^0 and 45^0

2. If ABC and DEF are congruent triangles such that $\angle A = 470$ and $\angle E = 830$, then $\angle C=$
(a) 50^0 (b) 60^0 (c) 70^0 (d) 80^0

3. Find the ratio of 50 paise to Rs 5
(a) 10 : 1 (b) 1 : 10 (c) 1 : 5 (d) none of these

4. 72% of 25 students are good in hindi, how many are not good in hindi?
(a) 16 (b) 14 (c) 18 (d) 7

5. The difference in the measures of two complementary angles is 12^o. Find the measures of the angles.
(a) 51^o and 49^o (b) 51^o and 39^o (c) 60^o and 30^o (d) 50^o and 40^o

6. If two angles are supplementary then the sum of their measures is _____ .
(a) 90^0 (b) 180^0 (c) 360^0 (d) 45^0

7. Which is a solution of the equation x + 4 = 6
(a) x = 2 (b) x = 3 (c) x = 4 (d) x = 6

8. The mean of the first five whole number is _____ .
(a) 2 (b) 5 (c) 3 (d) 4

9. The value of 26.3 ÷ 1000 is
(a) 0.0263 (b) 0.2630 (c) 26300 (d) 26.300

10. – 8 x 10 x 9 is equal to
(a) 27 (b) – 27 (c) – 720 (d) 720

11. Find the value of (–3) × (–6) × (–2) × (–1)

12. Find the mean of the first five whole numbers.

13. Find the average of 4.2, 3.8 and 7.6

14. Express 4 kg 8 g in kg.

15. Which angle is included between the sides DE and EF of ΔDEF?

16. Write the angle opposite to the side LM of ΔLMN.

17. The difference in the measures of two complementary angles is 12^0. Find the measures of the angles.

18. Solve: 8y = 36

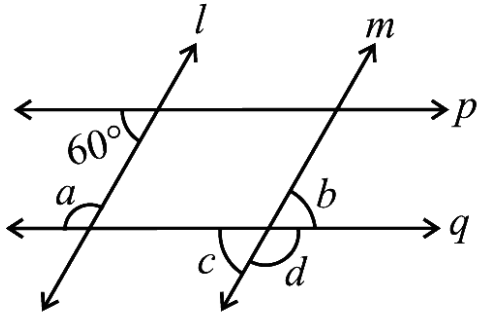
19. Write $\frac{1}{3}$ as per cent.

20. Find the ratio of 30 days to 36 hours.

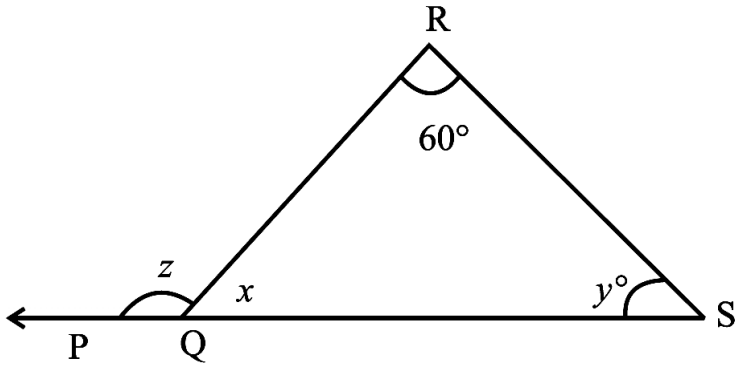
SECTION – B

Questions 21 to 26 carry 2 marks each.

21. Find the values of the angles *a*, *b*, c and *d* in the given figure lines $l \parallel m$, $p \parallel q$:



22. In the below figure, if y is five times x, find the value of z.



23. Harmeet purchased 3.5kg of potatoes at the rate of Rs.13.75 per kg. How much money should she pay in nearest rupees?

24. Find a number, such that one fourth of the number is 3 more than 7.

OR

Find a number, such that when I subtracted 11 from twice a number, the result was 15.

25. If ΔABC ≅ ΔPQR under the correspondence ABC ↔ RQP, write all the corresponding congruent parts of the triangles.

26. Find: (a) 125 ÷ (–25) (b) 80 ÷ (–5)

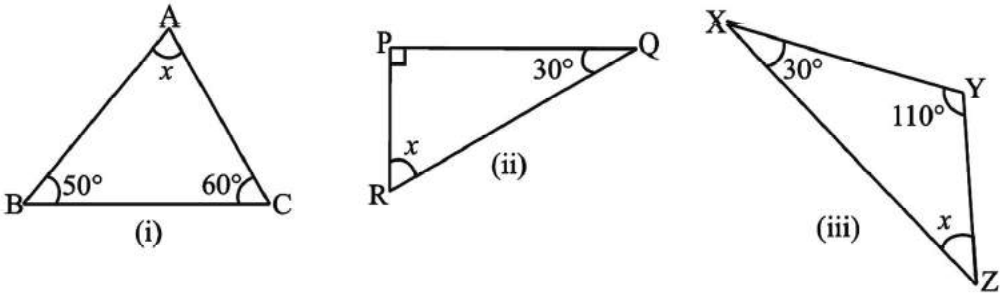
OR

Write two integers which are smaller than – 5 but their difference is – 5.

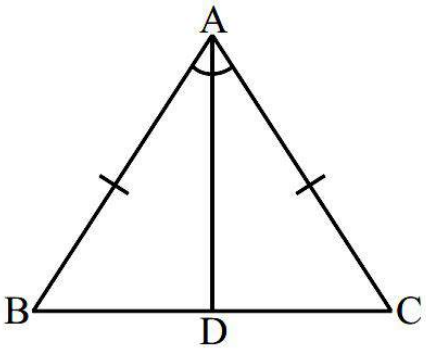
SECTION – C

Questions 27 to 34 carry 3 marks each.

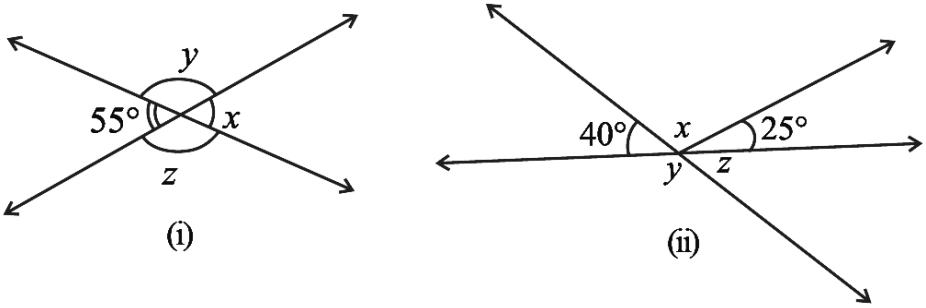
27. Find the value of x in the following figures:



28. In the below figure, AB = AC and AD is the bisector of ∠BAC. Prove that (i) ΔADB ≅ ΔADC (ii) ∠B = ∠C



29. Find the values of the angles *x*, *y*, and *z* in each of the following:



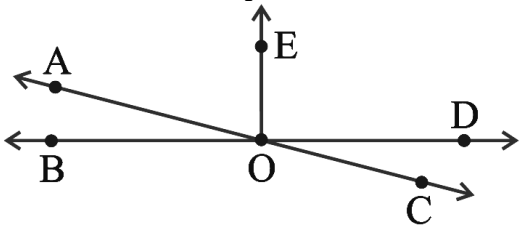
OR

In the adjoining figure, name the following pairs of angles.

(i) Obtuse vertically opposite angles

(ii) Adjacent complementary angles

(iii) Adjacent angles that do not form a linear pair



30. Raju's father's age is 5 years more than three times Raju's age. Find Raju's age, if his father is 44 years old.

31. The ages in years of 10 teachers of a school are:
32, 41, 28, 54, 35, 26, 23, 33, 38, 40
(i) What is the age of the oldest teacher and that of the youngest teacher?
(ii) What is the range of the ages of the teachers?
(iii) What is the mean age of these teachers?

32. Juhi sells a washing machine for Rs 13,500. She loses 20% in the bargain. What was the price at which she bought it?

33. 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 – 350 m.

34. Saili plants 4 saplings, in a row, in her garden. The distance between two adjacent saplings is $\frac{3}{4}$ m. Find the distance between the first and the last sapling.

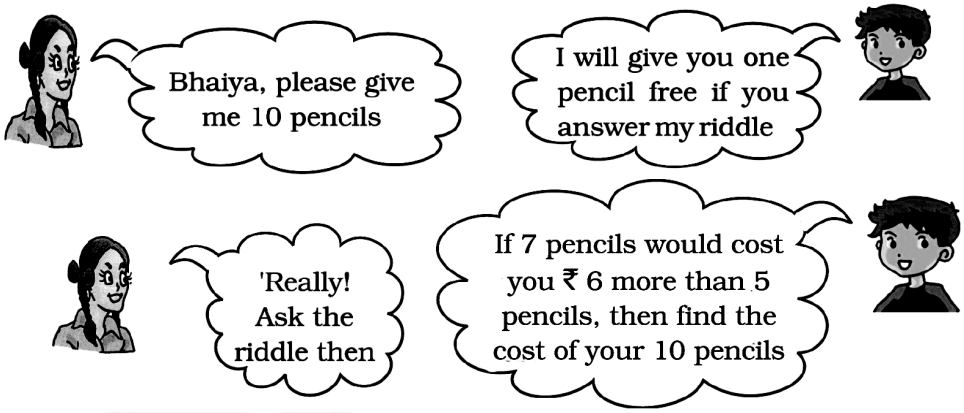
OR

In the morning, a milkman filled $5\frac{1}{2}$ L of milk in his can. He sold to Renu, Kamla and Renuka $\frac{3}{4}$ L each; to Shadma he sold $\frac{7}{8}$ L; and to Jassi he gave $1\frac{1}{2}$ L. How much milk is left in the can?

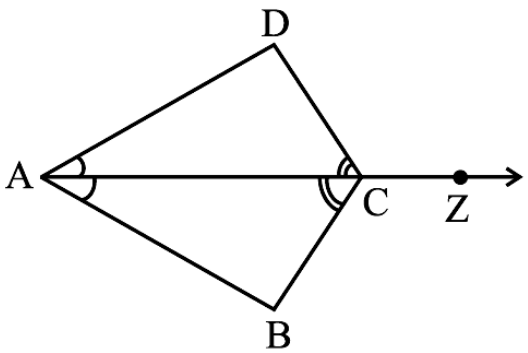
SECTION – D

Questions 35 to 40 carry 4 marks each.

35. Look at the below figure, read the conversation between brother and sister. If she answers the riddle correctly how ever will she pay for the pencils?



36. In the below figure, ray AZ bisects $\angle$DAB as well as $\angle$DCB.
(i) State the three pairs of equal parts in triangles BAC and DAC.
(ii) Is $\Delta BAC \cong \Delta DAC$? Give reasons.
(iii) Is AB = AD? Justify your answer.
(iv) Is CD = CB? Give reasons.



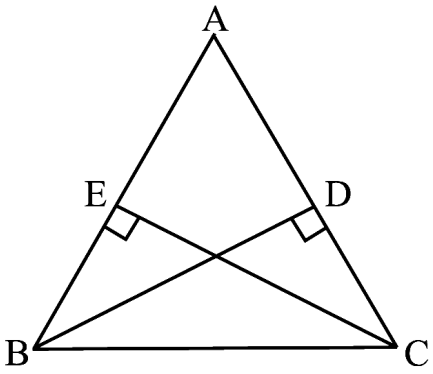
OR

In the below figure, BD and CE are altitudes of ΔABC such that BD = CE.

(i) State the three pairs of equal parts in ΔCBD and ΔBCE.

(ii) Is ΔCBD ≅ ΔBCE? Why or why not?

(iii) Is ∠DCB = ∠EBC? Why or why not?



37. Three persons Amar, Akbar and Anthony invested different amounts in a fixed deposit scheme for one year at the rate of 12% per annum and earned a total interest of ` 3,240 at the end of the year. If the amount invested by Akbar is ` 5000 more than the amount invested by Amar and the amount invested by Anthony is ` 2000 more than the amount invested by Akbar, what is the amount invested by Akbar?

OR

A certain sum of money was lent under the following repayment scheme based on Simple Interest:

8% per annum for the initial 2 years

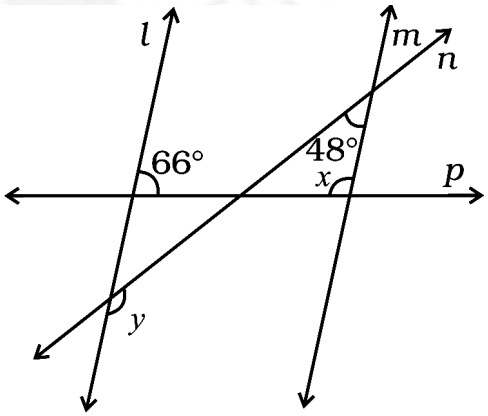
9.5% per annum for the next 4 years

11% per annum for the next 2 years

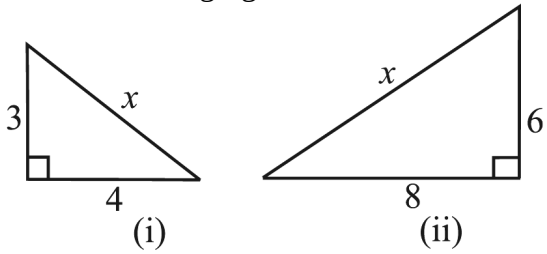
12% per annum after the first 8 years

If a person repaid ` 22,500 after 10 years of borrowing a loan, at 10% per annum simple interest find out what amount did he take as a loan?

38. In the below figure, two parallel lines l and m are cut by two transversals n and p. Find the values of x and y.



39. Find the unknown length *x* in the following figures



40. The data given below shows the production of motor bikes in a factory for some months of two consecutive years.

Months	2008	2007
Feb	2700	2800
May	3200	4500
August	6000	4800
October	5000	4800
December	4200	5200

Study the table given above and answer the following questions:
(a) Draw a double bar graph using appropriate scale to depict the above information and compare them.
(b) In which year was the total output the maximum?
(c) Find the mean production for the year 2007.
(d) For which month was the difference between the production for the two years the maximum?