

# KENDRIYA VIDYALAYA, VIJAYAPURA

## Sample paper 1 for half yearly examination(2019-20)

Subject: Mathematics

Max marks : 80

Class: VII

Time : 2 1/2 Hrs

### General Instructions:

1. All questions are compulsory.
2. Section A comprises of 20 questions carrying 1 mark each.
3. Section B comprises of 6 questions carrying 2 marks each.
4. Section C comprises of 8 questions carrying 3 marks each.
5. Section D comprises of 6 questions carrying 4 marks each.

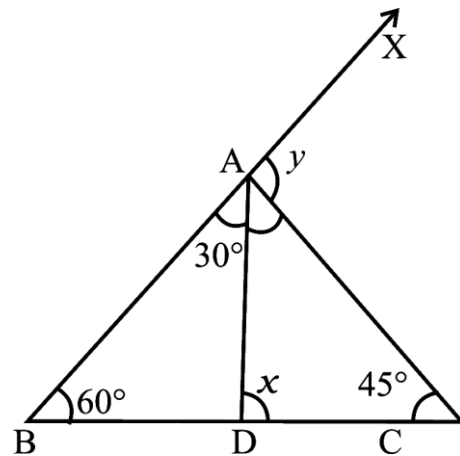
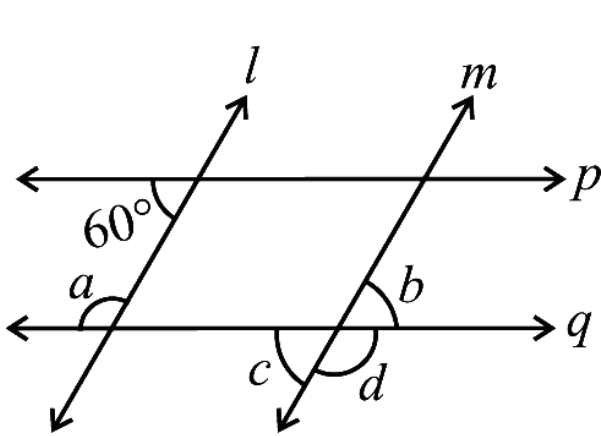
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### SECTION – A

1. Find the mean of the first five whole numbers.
2. Write equations for the statements: One fourth of  $m$  is 3 more than 7.
3. Express 4 kg 8 g in kg.
4. Write the Angle opposite to the side LM of  $\triangle LMN$ .
5. The difference in the measures of two complementary angles is  $12^\circ$ . Find the measures of the angles.
6. Find the ratio of 30 days to 36 hours.
7. Solve for  $x$ .  $4x + 1 = 64$ .
8. Put the appropriate sign  $>, <, =$ .  $-231 + 79 + 51 \dots\dots -399 + 159 + 81$
9. If  $a = -312$  and  $b = 46$  find  $a + b$ .
10. Solve  $(-201) \div (-3)$ .
11. Convert  $\frac{523}{11}$  in mixed fraction.
12. Find  $12 \div \frac{3}{4}$ .
13. If the sum of two angles is  $180^\circ$ , then the angles are .....
14. Find the complementary angle of  $37^\circ$ .
15. Any two congruent angles, one has a measure of  $70^\circ$ ; the measure of the other angle is.....
16. Write any two properties to prove triangles congruent.
17. If all sides of a triangle is equal, then it is a ..... triangle.
18. The longest side of a right angled triangle is called .....
19. Convert 0.05 as percents.
20. Find 15 % of 250.

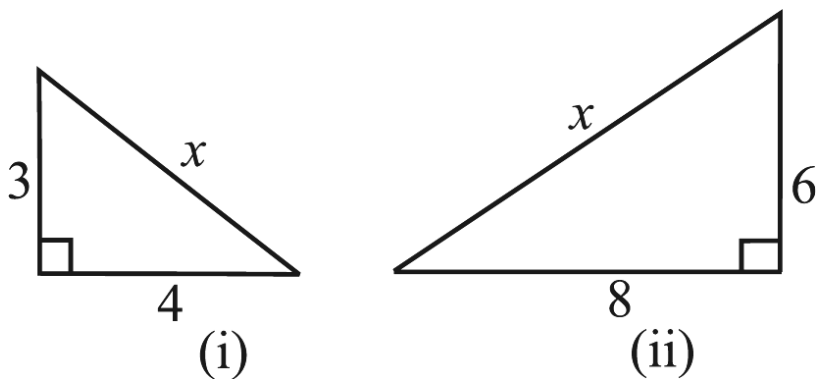
## SECTION – B

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 above right sided figure, find  $x$  and  $y$ .

23. Find the unknown length  $x$  in the following figures



OR

ABCD is a quadrilateral. Is  $AB + BC + CD + DA > AC + BD$ .

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

OR

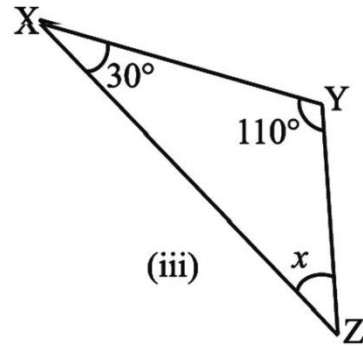
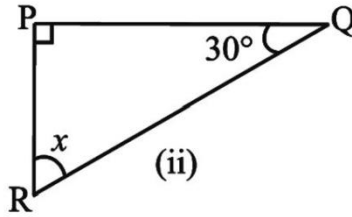
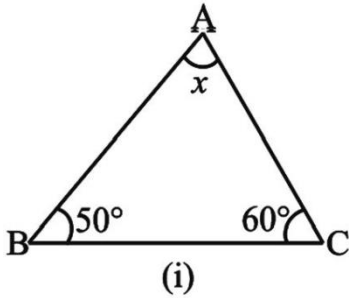
A car runs 16 km using 1 litre of petrol. How much distance will it cover using  $\frac{11}{7}$  litres of petrol?

25. Which is greater :  $\frac{2}{7}$  of  $\frac{3}{4}$  or  $\frac{3}{5}$  of  $\frac{5}{8}$

26. Write two integers which are smaller than  $-5$  but their difference is  $-5$ .

**SECTION – C**

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



OR

Find the perimeter of the rectangle whose length is 40cm and a diagonal is 41 cm.

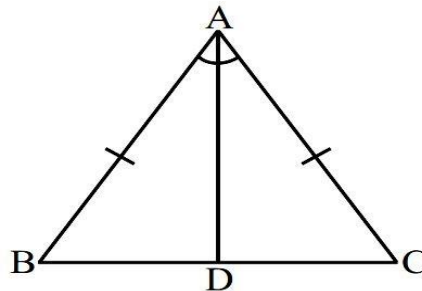
28. The ages in years of 10 teachers of a school are:

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?

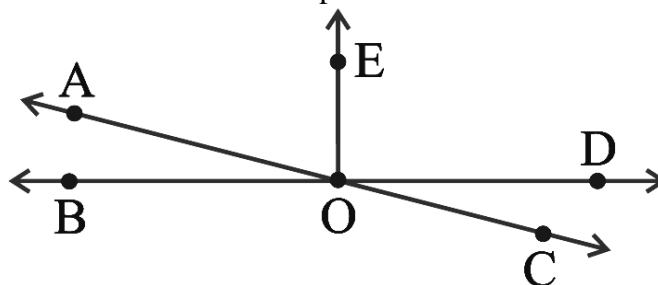
29. In the below figure,  $AB = AC$  and  $AD$  is the bisector of  $\angle BAC$ . Prove that (i)  $\triangle ADB \cong \triangle ADC$

(ii)  $\angle B = \angle C$



30. 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



31. 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.

OR

In a family, the consumption of wheat is 4 times that of rice. The total consumption of the two cereals is 80 kg. Find the quantities of rice and wheat consumed in the family.

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.

OR

Fill in the blanks:

- (a) .....  $\div (4) = -3$
- (b)  $20 \div \dots = -2$
- (c)  $13 \div [(-2) + 1] = \dots$

34. Sali 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.

**SECTION – D**

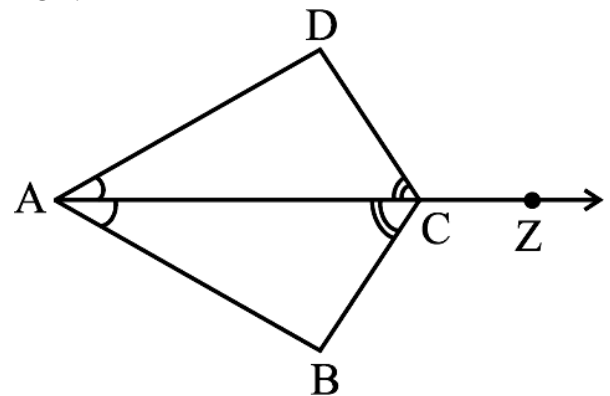
35. In a class test containing 15 questions, 4 marks are given for every correct answer and  $(-2)$  marks are given for every incorrect answer. (i) Gurpreet attempts all questions but only 9 of her answers are correct. What is her total score? (ii) One of her friends gets only 5 answers correct. What will be her score? (iii) What you will do to get good marks?

OR

A shopkeeper earns a profit of Re 1 by selling 1 pen and incur a loss of 40 paise per pencil while selling pencil of her old stock.

- (a) In a particular month she incurs a loss of Rs 5. In this period she sold 45 pens. How many pencils did she sells in this period?
- (b) In the next month she earns neither profit nor loss. If she sold 70 pens, How many pencils did she sells?

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.

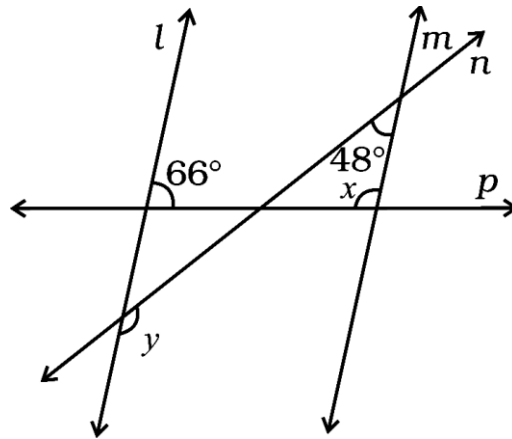
37. A girl is 28 years younger than her father. The sum of their ages is 50 years. Find the ages of the girl and her father.

OR

Irfan says that he has 7 marbles more than five times the marbles Parmit has. Irfan has 37 marbles. How many marbles does Parmit have?

38. Anil deposited Rs. 20,000 for saving as a fixed deposit in a bank at the rate of 10% per annum. Find the amount he will get after 5 years. What are the benefits of savings?

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



40. A mathematics teacher wants to see, whether the new technique of teaching she applied after quarterly test was effective or not. She takes the scores of the 5 weakest children in the quarterly test (out of 25) and in the half yearly test (out of 25):

Students	Ashish	Arun	Kavish	Maya	Rita
Quarterly	10	15	12	20	9
Half Yearly	15	18	16	21	15

Draw the graph.

