PODAR INNOVATION CENTRE
REDEFINING LEARNING

REVISION QUESTION BANK 3

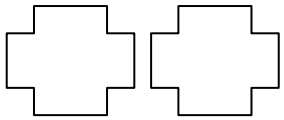
Subject: Mathematics	**Grade**: VII

Portion: Congruence of triangles, ratio, proportion and unitary method, data handling and probability, Perimeter and area

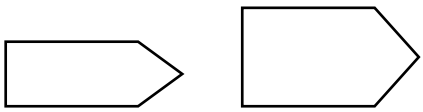
Congruence of triangles

1) Identify the pairs of congruent figures from the following. (Trace one figure and use the method of superposition.

(i)



(ii)



2) State giving reasons, whether the following triangles will be congruent or not.

(i) In ΔABC and ΔPQR, $AB = PQ$, $\angle B = \angle Q$ and $BC = QR$.

(ii) In ΔKLM and ΔABC, $KL = AB$, $\angle K = \angle L$, $LM = BC$

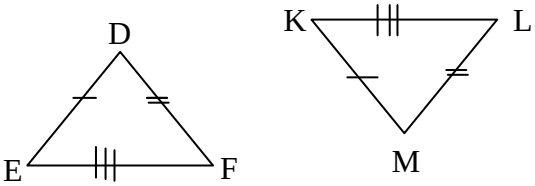
3) In the adjoining figure, $\Delta DEF \cong \Delta KLM$.
Complete the following statements.

(i) KL≅ _____

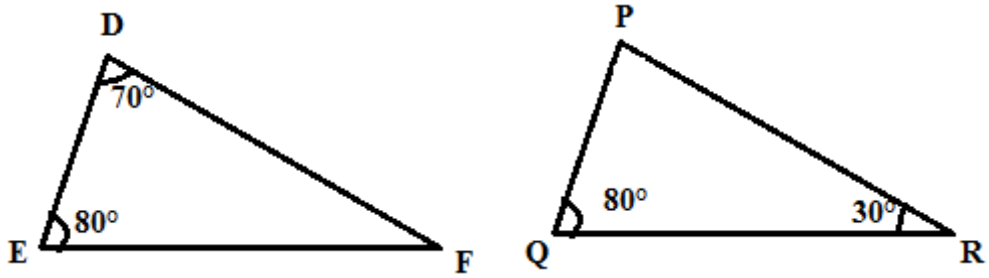
(ii) DE≅ _____

(iii) ∠EDF≅_____

(iv) ∠DEF≅_____

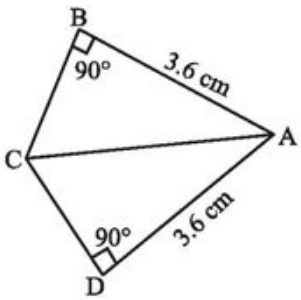


4) In the below figure, if EF = QR name the congruence rule used for the congruency of the given triangles.

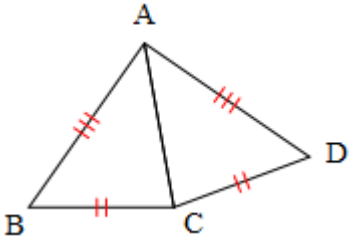


5) In the below figure, by which congruence rule the following triangles are congruent?

(i)

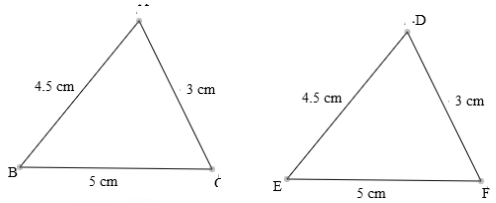


(ii)



REVISION QUESTION BANK 3

6) State giving reasons, whether ΔABC≅Δ DEF



7) **3.** In the adjoining figure, if $\Delta ABC \cong \Delta FDE$, then complete the following statements.

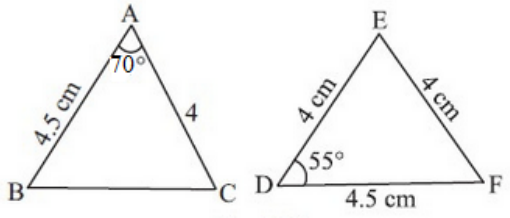
(i) BC = ___ cm

(ii) $\angle B$ = ___ °

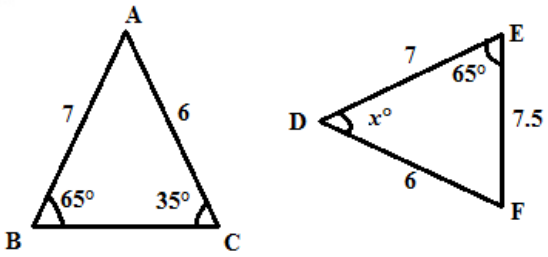
(iii) $\angle C$ = ___ °

(iv) $\angle E$ = ___ °

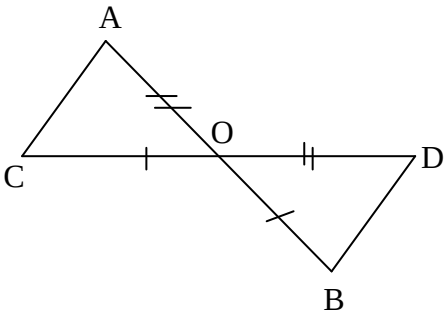
(v) $\angle F$ = ___ °



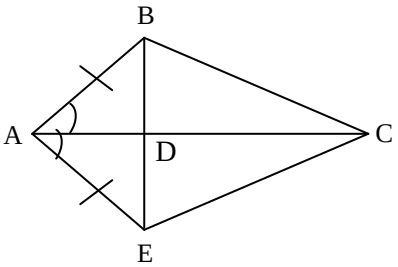
8) In the adjoining figure, if $\Delta ABC \cong \Delta FDE$, then find the value of x.



9) In the given figure, line segments AB and CD intersect each other at the point O such that AO = OD and OB = OC prove that △AOC is congruent to △BOD



10) In the given figure, AB = AE, ∠BAD = ∠EAB. Prove that ΔBDC ≅ ΔEDC



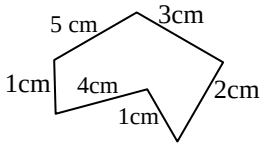
PODAR INNOVATION CENTRE
REDEFINING LEARNING

REVISION QUESTION BANK 3

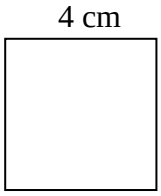
Perimeter and Area

11) Find the perimeter of the following figures.

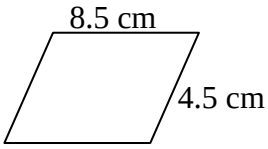
(i)



(ii)

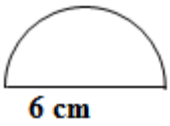


(iii)

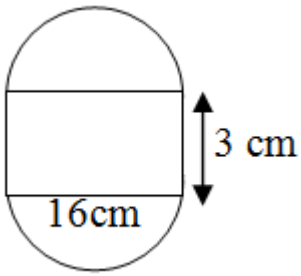


12) Find the perimeter of the following figures. (π = 3.14)

(i)



(ii)



13) Find the perimeter of the following. $\left(\pi = \frac{22}{7}\right)$

(i) A square with side 3.5 cm
(ii) A rectangle with sides 14 cm and 8 cm
(iii) A parallelogram with sides 6 cm and 7 cm
(iv) A circle with diameter 49 cm
(v) A circle with radius 35 cm

14) The perimeter of a rectangular room is 250 m. If its length is 60 m, find the breadth of a rectangular hall

15) The perimeter of a square field is 8 km, find the length of each side in m.

16) A wire in the form of a circle of radius 42 cm is bent into a square. Find the side of the square. $\left(\pi = \frac{22}{7}\right)$

17) The radius of a circular field is 24.5 m. find the distance run by a boy in making 4 complete rounds.

18) The sides of a triangle are 0.06 m, 0.0.05 m and 0.0.025 m. Find the perimeter of the triangle and express it in cm.

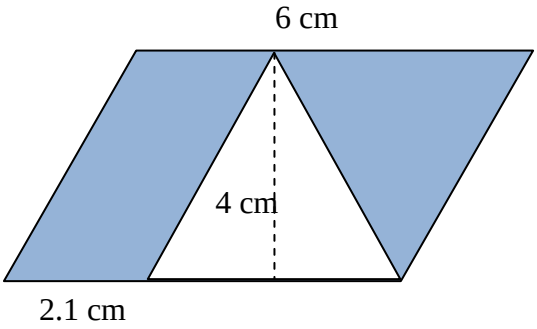
19) The diameter of a bicycle wheel is 28 cm. Find how many times the wheel will revolve in order to cover a distance of 352 m. $\left(\pi = \frac{22}{7}\right)$

20) Find the area of the following :

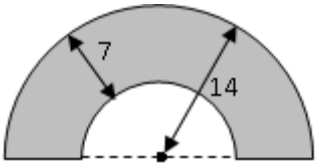
(i) A square with side 5 cm
(ii) A rectangle with sides 6 cm and 3.5 cm
(iii) A triangle with base 7.5 cm and altitude 4 cm
(iv) A parallelogram with base 8 cm and height 3 cm

REVISION QUESTION BANK 3

21) Find the area of the shaded portion in the following figure:



22) Find the perimeter and area of the shaded region in the following figure.



23) A rectangular lawn of length 50 m and breadth 35 m is to be surrounded externally by a path which is 2 m wide. Find the cost of levelling the path at the rate of ₹30 per m^2.

24) A painting is painted on a cardboard 19 cm and 14 cm wide, such that there is a margin of 1.5 cm along each of its sides. Find the total area of the margin.

25) A rectangular garden is 90 m long and 75 m broad. A path 5 m wide is to be built out around it. Find the area of the path.

Ratio, proportion and unitary method

26) Find the ratio of:
   (i) 45 min : 560 seconds
   (ii) 0.4 kg : 450 g
   (iii) 60 cm : 7 m

27) Compare the following ratios:
   (i) 5 : 6 and 4 : 7
   (ii) 1 : 7 and 2 : 5
   (iii) 21 : 8 and 22 : 9

28) Divide ₹ 1275 between Shashi and Shrishti in the ratio 7 : 8.

29) Divide 153 marbles among Jeet and Deepak in the ratio 4 : 13.

30) Two numbers are in the ratio 2 : 5. If the difference of the two numbers is 27, find the numbers.

31) Check whether the following numbers are in proportion.
   (i) 5, 10, 9, 18 (ii) 2, 4, 5, 8

32) Find the value of x in the following:
   (i) $4 : x = 5 : 15$ (ii) 8: 2 = 24: x

33) Find the fourth proportional to the following:

REVISION QUESTION BANK 3

(i) 32, 75, 96 (ii) 35, 7, 25

34) Find the value of x if they are in continued proportion.
   (i) 16, x, 9
   (ii) 2,4, x
   (iii) 6, x, 24

35) Find the mean proportional between:
   (i) 8 and 32 (ii) 4 and 9

36) A car can travel 60 kilometers on 5 litres of petrol. How far can it travel on 45 litres?

37) 36 kg of onions cost ₹ 1008. How many kilograms of onions can you get with ₹392 ?

38) A car travels 420 kilometers in 5 hours (with a constant speed). How much time will it take traveling 168 km.

39) Rishi has 14 pens in two boxes. How many pens will 8 such boxes have?

40) A train is moving at a uniform speed of 68 km per hour. How far will it go in 15 minutes?

41) The weight of 56 books is 7 kg.
   (i) What is the weight of 90 such books?
   (ii) How many such books weigh 7.5 Kg?

42) A family consumes 30 kg of sugar in 15 days. How much sugar will be consumed in 275 days?

Data Handling and Probability

43) **1.** Arrange the following data in an array in ascending order
   23, 21, 29, 20, 20, 18, 21, 22, 16, 19

   (i) Find the range of the data
   (ii) Find the mean of the data

44) Find the mean of : 6, 8, 9, 12, 5

45) A survey was conducted to find the number of people in the age group of 36-40,who liked to play outdoor games. Find the mean of the data.

Age in years	36	37	38	39	40
Number of people	7	12	15	10	9

46) The rainfall in a city on seven days of a certain week was recorded as follows:

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Rainfall in mm	25	1.7	0.0	3.2	5.2	14.6	0.0

   (i) Find the range of rainfall

(ii) Find the mean rainfall for the week

47) The daily wages of 60 workers in a factory are given below. Find the mean daily wages.

Daily wages in ₹	140	150	160	180	190
Number of workers	14	16	15	7	8

48) The mean age of 5 children in a family is 12 years, if four of them are respectively 6, 11, 13 and 16 years find the age of the fifth child.

49) If the mean of 17, 19, 24, 15, 18, 16, x, 14 is 17,find the value of x

50) The mean attendance of a school for the first four days of the week was 780 and for the first five days it was 840. How many students were present on Friday?

51) Find the median of the following.
(i) The first seven even natural numbers
(ii) 5, 0, 2, 4, 3
(iii) 25, 22, 28, 23, 21, 27, 25, 24, 20

52) The table below shows the amount of pocket money of 40 students. Find the mode of the data

Pocket money in ₹	50	100	150	200	140
No. of children	12	14	7	7	2

53) The table below shows the height of 40 students of std VII. Find the mode of the data

Height(in cm)	135	136	138	139	140
No. of children	8	12	11	7	2

54) Find the mean and median for the following set of data:
23, 2, 42, 6, 36, 11, 29, 9, 15

55) The marks obtained by 45 students in a competition are given below. Find the median and the mean marks.

Marks	100	125	150	175	200
Number of students	6	8	9	12	10

REVISION QUESTION BANK 3

56) A dice is tossed once. Find the probability of getting

(i) number 4
(ii) Number less than 4

57) A bag contains 3 red balls, 4 blue balls, and 9 green balls. Mary draws 1 ball out of the bag. What is the probability that she gets

(i) A green ball
(ii) A blue ball?

58) In a lottery of 50 tickets numbered 1 to 50, one ticket is drawn. Find the probability that the drawn ticket bears a prime number.

59) One card is drawn at random from a pack of 52 cards. Find the probability that the card drawn is:

(i) an ace

(ii) a red card

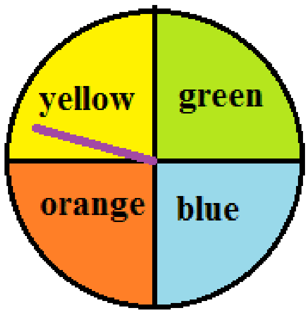
(iii)a face card

(iv)a red king

60) Each of the letters of the word MISSISSIPPI are written on separate pieces of paper that are then folded, put in a hat, and mixed thoroughly. One piece of paper is chosen from the hat at random. What is the probability it is an I?

61) Using the given spinner, find the probability of getting the pointer at

(i) yellow
(ii) blue or green
(iii)Not orange
(iv)pink



>>