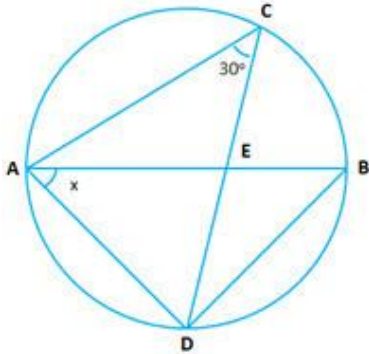


Marking Scheme: Three questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.

Question 1:

- a. In the given circle with diameter AB, find the value of x.



- ii. The radius of the circle is 13 cm and the length of one of its chords is 10 cm. Find the distance of the chord from the centre.

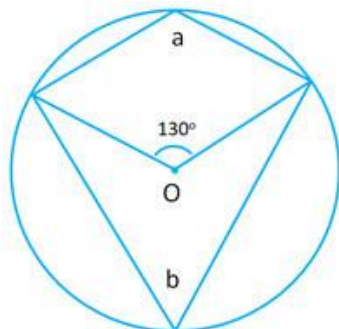
- b. If the median of 11, 12, 14, 18, $x + 2$, $x + 4$, 30, 32, 35, 41 is 24, find the value of x.
c. The marks obtained by a set of students in an examination are given below:

Marks	5	10	15	20	25	30
No. of students	6	4	6	12	x	4

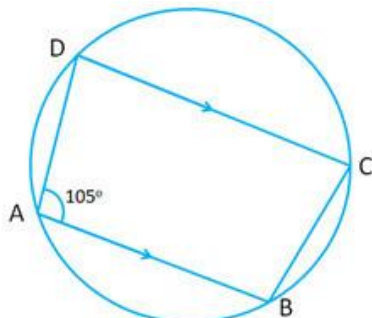
Given that the mean marks of the set is 18, calculate the value of x.

Question 2:

- a. In each of the following figures, O is the centre of the circle. Find the values of a and b.



- b. In the figure given below, find (i) $\angle BCD$ (ii) $\angle ADC$ (iii) $\angle ABC$.



- c. Eight metallic spheres; each of radius 2 mm, are melted and cast into a single sphere. Calculate the radius of the new sphere.

Question 3:

- a. Fill in the blanks:
- If the probability of winning a game is 0.3, then probability of losing it is _____
 - Probability of drawing an ace from a deck of 52 cards is _____
 - If $P(E) = 0.37$, then $P(\text{not } E)$ will be _____
- b. Calculate the median of : 152, 155, 160, 144, 145, 148, 147, 149, 150
- c. Find the mean weight of 50 girls from the following table.

Weight in kg	40	42	34	36	46
No. of girls	6	6	15	14	7