



MATHS

BOOKS - KC SINHA ENGLISH

ANGLES AND THEIR MEASURES - FOR BOARDS

Solved Examples

1. Find the degree measure corresponding to the following radian measures: $\left(\frac{\pi}{6}\right)^c$



[Watch Video Solution](#)

2. Find the degree measure corresponding to

the following radian measures: $\left(\frac{4\pi}{5}\right)^c$



[Watch Video Solution](#)

3. Find the degree measure corresponding to

the following radian measures: $(1.2)^c$



[Watch Video Solution](#)

4. Express $45^{\circ}20'10''$ in radian measure
($\pi = 3.1415$)



[Watch Video Solution](#)

5. If the angles of a triangle are in the ratio 3:4:5, find the smallest angle in degrees and the greatest angle in radians.



[Watch Video Solution](#)

6. Find the angle between the hour-hand and the minute-hand in circular measure at half past 4



[Watch Video Solution](#)

7. The angles of a triangle are in A.P. The ratio of the number of degrees in the least angle is $60^\circ : \pi$. Find all angles of triangle in degrees.



[Watch Video Solution](#)

8. Find the radius of the circle in which a central angle of 45° intercepts an arc 132cm

(Use $\pi = \frac{22}{7}$)



Watch Video Solution

9. Find the length of an arc of a circle of radius 10cm subtending an angle of 30° at the centre



Watch Video Solution

10. The minute hand of a watch is 35 cm long.

How far does its tip move in 18 minutes ?

(use $\pi = \frac{22}{7}$)



Watch Video Solution

11. Assuming the distance of the earth from the moon to be 3,84,400 km and the angle subtended by the moon at the eye of a person on the earth to be $31'$, find the diameter of the moon.





[Watch Video Solution](#)

12. The wheel of a railway carriage is 40 cm. in diameter and makes 6 revolutions in a second, how fast is the train going ?



[Watch Video Solution](#)

13. Assuming that a person of normal sight can read print at such a distance that the letters subtend an angle of $5'$ at his eye, find

the height of the letters that he can read at a distance of 12 metres.



[Watch Video Solution](#)

Exercise

1. Find the degree measures corresponding to

the radian measures: $\left(\frac{4\pi}{3}\right)^c$



[Watch Video Solution](#)

2. Find the degree measures corresponding to

the radian measures: $\left(7\frac{\pi}{6}\right)^c$



Watch Video Solution

3. Find the degree measures corresponding to

the radian measures: $\left(\frac{5\pi}{3}\right)^c$



Watch Video Solution

4. Find the degree measures corresponding to

the radian measures: $\left(\frac{-5\pi}{24}\right)^c$



Watch Video Solution

5. Find the degree measures corresponding to

the radian measures: $\left(-\frac{2\pi}{3}\right)^c$



Watch Video Solution

6. Find the degree measures corresponding to

the radian measures: $\left(33\frac{\pi}{320}\right)^c$



Watch Video Solution

7. Find the degree measures corresponding to

the radian measures: 6^c



Watch Video Solution

8. Find the degree measures corresponding to the radian measures: $(-4)^c$



Watch Video Solution

9. Find the degree measures corresponding to the radian measures: $\left(\frac{11}{16}\right)^c$



Watch Video Solution

10. Find the degree measures corresponding to the radian measures: $(2.64)^c$



[Watch Video Solution](#)

11. Express the angles in radian measure: 105^0



[Watch Video Solution](#)

12. Express the angles in radian measure: 25^0



[Watch Video Solution](#)

13. Express the angles in radian measure: 240°



[Watch Video Solution](#)

14. Express the angles in radian measure: -56°



[Watch Video Solution](#)

15. Express the angles in radian measure: 520°



[Watch Video Solution](#)

16. Express the angles in radian measure: $7^{\circ}30'$



Watch Video Solution

17. Express the angles in radian measure: $4^{\circ}20'$



Watch Video Solution

18. Express the angles in radian measure:

$42^{\circ}57'16''$



[Watch Video Solution](#)

19. Express the angles in radian measure:

$$-47^{\circ}30'$$



[Watch Video Solution](#)

20. Two angle of a triangle are $72^{\circ}53'51''$ and $41^{\circ}22'50''$ respectively. Find the third angle in radions.



[Watch Video Solution](#)

21. Find the angle between the hour-hand and the minute-hand in circular measure at 40' clock



[Watch Video Solution](#)

22. The angle of triangle are in A.P. and the number of degrees in the least is to the number of radians in the greatest is $36 : \pi$, find the angles in degrees.



[Watch Video Solution](#)

23. Find the degree measure of the angle subtended at the centre of a circle of radius 100 cm by an arc of length 22 cm (use $\pi = \frac{22}{7}$).



Watch Video Solution

24. Find the radius of a circle in which a central angle of 45° intercepts an arc of 187 cm.



Watch Video Solution

25. Find the radius of the circle in which a central angle of 60° intercepts an arc of length 37.4 cm (use $\pi = \frac{22}{7}$).



Watch Video Solution

26. In a circle of diameter 40 cm, the length of a chord is 20 cm. Find the length of the minor arc of the chord.



Watch Video Solution

27. At what distance does a man $5\frac{1}{2}$ ft. in height, subtend an angle of $15''$?



[Watch Video Solution](#)

28. In two circles, arcs of equal length subtend angles of 60° and 75° at their centres, show that their radii are in the ratio $5:4$



[Watch Video Solution](#)

29. If the arcs of same length in two circles subtend angles of 75° and 120° at their respective centres, find the ratio of their radii.



Watch Video Solution

30. If arcs of the same lengths in two circles subtend angles of 65° and 110° at the centre, find the ratio of their radii.



Watch Video Solution

31. Find the angle in radian through which a pendulum swings if its length is 75 cm and the tip describes an arc of length (i) 10 cm (ii) 15 cm (iii) 21 cm



Watch Video Solution

32. Find the angle in radian through which a pendulum swings if its length is 75 cm and the tip describes an arc of length (i) 10 cm (ii) 15 cm (iii) 21 cm



Watch Video Solution

33. Find the angle in radian through which a pendulum swings if its length is 75cm and the tip describes an arc of length:

$$15\text{cm} \left(\text{use } \pi = \frac{22}{7} \right)$$



Watch Video Solution

34. The minute hand of a watch is 1.5cm long. How far does its tip move in 50 minutes.



Watch Video Solution

35. The minute hand of watch is 1.5 cm long.

How far does its tip move in 40 minutes?



Watch Video Solution

36. A wheel makes 30 revolutions per minute.

Find the radian measure of the angle

described by one of the spokes of the wheel in

$\frac{1}{2}$ second



Watch Video Solution

37. A wheel makes 360 revolutions in one minute. Through how many radians does it turn in one second?



Watch Video Solution

38. Assuming the average distance of the earth from the sun to be 149700000 km and the angle subtended by the sun at the eye of a person on the earth to be $32'$, find the sun's diameter.



[Watch Video Solution](#)

39. about to only mathematics



[Watch Video Solution](#)

40. If the angular diameter of the moon be $30'$, how far from the eye a coin of diameter 2.2 cm be kept to hide the moon?



[Watch Video Solution](#)

