



MATHS

BOOKS - KC SINHA MATHS (HINGLISH)

ANGLES AND THEIR MEASURES - FOR BOARDS

Solved Examples

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



4. Express $45^{0}20'10''$ in radian measure $(\pi = 3.1415)$

5. The angles of a triangle are in the ratio 3:4:5. Find the smallest angle in degrees and the greatest angle in radians.

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



7. The angles in a triangle are in A.P. and the ratio of the smallest angle in degrees to the greatest angle in radians is $60:\pi$ Find the angle of the triangle in degrees and radians.



8. Find the radius of the circle in which a central angle of 45^0 intercepts an arc 132cm (Use $\pi = \frac{22}{7}$)

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9. Find the length of an arc of a circle of radius

10cm subtending an angle of 30^0 at the centre

10. The minute hand a watch is 35cm long. How for does its tip move in 18minutes? $\left(use\pi = \frac{22}{7}\right)$ Watch Video Solution

11. Assuming the distance of the earth from the moon to be 38,400 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.

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

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13. Assuming that a person of normal sight can red print to such distance that the letters subtend and angle of 5 at his eye, find is the

height of the letters that he can read at a

distance of 12 metres.



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

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3. Find the degree measures corresponding to

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



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5. Find the degree measures corresponding to

the radian measures:
$$\Big(-2rac{\pi}{3}\Big)^c$$

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

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7. Find the degree measures corresponding to

the radian measures: 6^c





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9. Find the degree measures corresponding to

the radian measures: $\left(\frac{11}{16}\right)^c$

to the radian measures: $(2.64)^c$



11. Express the angles in radian measure: 105°

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

13. Express the angles in radian measure: 240°



16. Express the angles in radian measure: $7^030'$



18. Express the angles in radian measure: $42^{0}57'16''$



19. Express the angles in radian measure: $-47^0 30'$

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20. Two angle of a triangle are $72^{0}53'51'$ and $41^{0}22'50''$ respectively. Find the third angle in radions.

21. Find the angle between the hour-hand and the minute-hand in circular measure at 4O' clock



22. The angle of traingle 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.

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

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24. Find the radius of the circle in which a central angle of 45^0 makes an arc of 187cm $\left(use\pi=rac{22}{7}
ight)$

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25. Find the radius of the circle in which a central angle of 60^0 intercepts an arc of length $37.4 \text{ cm} \left(use \pi = \frac{22}{7} \right)$ Watch Video Solution

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

arc





28. In two circles, arcs of equal length subtend angles of 60^0 and 75^0 at their centres, show that their radii are in the ratio 5:4

29. If the arcs of same length in two circles subtend angles of 75^0 and 120^0 at their respective centres, find the ratio of their radii.



30. If arcs of the same lengths in two circles subtend angles of 65^0 and 110^0 at the centre,

find the ratio of their radii.



31. Find the angle in radian through which a pendulum swings if its length is 75cm and the tip describes an arc of length: 10cm

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32. Find the angle in radian through which a pendulum swings if its length is 75cm and the

tip describes an arc of length: 21cm

33. Find the angle in radian through which a pendulum swings if its length is 75cm and the tip describes an arc of length: $15cm\left(use\pi = \frac{22}{7}\right)$ **Vatch Video Solution**

34. The minute hand of a watch is 1.5cm long.

How far does its tip move in 50 minutes.



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

How far does its tip move in 40 minutes?

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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

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

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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.



39. A truck is travelling on a circular road of radius 1500 metres at 66 km/hr. Through what angle (in radians) does it turn in 10 second?

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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?

