



MATHS

BOOKS - CALCUTTA BOOK HOUSE

MATHS (BENGALI ENGLISH)

CIRCUMFERENCE OF CIRCLES

Examples

1. Some takes time $\frac{\pi x}{100}$ minutes to round a circular park. Then Soma will take times to

cross the park along its diameter -

A. $\frac{x}{200}$ minutes

B. $\frac{x}{100}$ minutes

C. $\frac{\pi}{100}$ minutes

D. $\frac{\pi}{200}$ minutes

Answer:



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2. A circle is inscribed in a square. If the side of the square be 10 cm, then the diameter of the circle is

A. 10 cm

B. 5 cm

C. 20 cm

D. $10\sqrt{2}$ cm

Answer:



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3. A circle is circumscribed about a square. If the side of the square be 5 cm, then the diameter of the circle is

A. $5\sqrt{2}$ cm

B. $10\sqrt{2}$ cm

C. 5 cm

D. 10 cm

Answer:



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4. A circular ring is of breadth 5 cm. Then the difference between ex-radius and in-radius of the ring is

A. 5 cm

B. 2.5 cm

C. 10 cm

D. None of these

Answer:



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5. If the diameter of a circle and the side of a square are equal, then find the ratio of their perimeters.



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6. The minutes hand of a clock is of length 7 cm. To round an angle of 90° , what length of arc should it travel ?



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7. If the perimeter of a semi-circle be 36 cm, then find its length of diameter.



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8. The radius of the wheel of a train is 0.35 m. If the wheel rounds 450 times in one minute, then find the velocity of the train per hour.



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9. A rectangular wire of length 18 cm and breadth 15 cm is bent into a circular wire. Then find the radius of this circular wire.



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10. Puja and Mohammad started a competition of race from the same time and same point of a circular track of diameter 56 m. When Puja finished the race by rounding 10 times the track, Mohammad then remained one round

behind Puja. How many of metres was race and by what meters Puja defeated Mohammad ?



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11. The time taken by Rahim to travel along the diameter of a circular field is 40 sec less as he takes the time to round the field. If the speed of Rahim be 90 m per minute, then find the diameter of the field.



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12. The ratio of the circumferences of two circles is $2 : 3$ and the difference between their radii is 2 cm. Find the diameters of the circles.



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13. Four greatest circular plates have been cut out from a circular plate of area 196 sq-cm. Find the circumference of each of the plates.



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14. Mahim takes the times 46 sec and 44 sec to round a circular Path of breadth 7 m 5 dcm by a bicycle along the outer and inner edges respectively. Find the diameter of the circular path along the inner edge.



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15. The ratio of the times required to travel along the outer edge and along the inner edge of a circular path by a bicycle is 20 : 19. If

the path between the edges be of breadth 5m,
then find the diameter of the inner circle.



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Exercise 2

1. A horse travelled a circular field in $1\frac{1}{2}$ minutes at a speed of 66 m per minute. What is the radius of the field ?

A. 15 m 75 m

B. 30 m

C. 15 m 70 cm

D. 25 m

Answer:



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2. The diameter of a circular wire is 5 dcm 6 cm. If the wire be bented into a square, then the side of the square is

A. 5 dcm 5 cm

B. 4 dcm 4 cm

C. 5 dcm

D. 4 dcm

Answer:



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3. If the radius of a circle be increased by 3 times, then how many times its circumference will be increased ?

A. 2 times

B. 3 times

C. $\frac{1}{3}$ time

D. 9 times

Answer:



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4. If the area of square between a circular and a square field of equal perimeter, be 484 sq-m, then the diameter of the circular field is

A. 14 m

B. 21 m

C. 28 m

D. 35 m

Answer:



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5. If the radius of a circle be increased by 75%, then the change of its perimeter is

A. 25% increase

B. 50% decrease

C. 75% increase

D. 150% decrease

Answer:



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6. The breadth of a ractangle is 44 m, its length is $2\frac{1}{2}$ times of its breadth. Find the diameter of the circle, the circumference of

which is equal to the perimeter of the rectangle.



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7. The difference of the circumference of a circle and its radius is 74 cm. Determine its diameter and circumference.



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8. The sum of the length of the circumference of a semi-circular bow and its arrow is 216 cm. Find the length of the arrow.



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9. A well is drugged on a square field of side 4.2 m. Find the expenditure of fencing round the well at a rate of Rs. 10 per meter.



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10. The time required to travel a circular field along its diameter is 30 sec less than the time required to travel it along its circumference by a person. If the speed of the person be 60 m per minute, then find the diameter of the circular field.



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11. There is a path around a circular garden. The outer circumference of that path is 912 m

and the inner circumference is 868 m. Find the breadth of the path.



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12. The difference of the circumference of two circles is 22 m and the sum of their radii is 10 m 5 dcm. Find the circumferences of the two circles.



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13. The circumference of a circle is $1\frac{1}{2}$ times of another circle and if the difference of their radii is 21 cm, then find the radii of the circles.



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14. The wheel of a vehicle revolves at a rate of 500 times per minute. If the velocity of the vehicle be 6 km and 6 hemi per hour, then find the diameter of the wheel.



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15. Two hands of a clock are of length 5 cm and 4 cm. How more distance the top of one of the hands will revolve than the top of the other hand in 2 days and 6 hours ?



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16. The circumference of the outer edge of a path which is around a circular lawn is 44 m more than the circumference of the inner edge of the path. Find the breadth of the path.



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17. The times required to travel a circular path of breadth 8 m along the outer and inner circumferences by a person by a bicycle are 23 sec and 21 sec respectively. Find the diameter of the inner circle of the path.



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18. The radius of the front wheel of an engine is 35 cm and the radius of its behind wheel is 84 cm. How many more revolutions will revolve the front than the behind wheel to travel a distance of 600 m ?



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