



MATHS

BOOKS - OSWAAL PUBLICATION MATHS (KANNADA ENGLISH)

SOLVED PAPER (SSLC KARNATAKA APRIL 2019)

Choose The Correct Alternative And Write The Complete Answer Along With Its Letter Of Alphabet **1.** If the n^{th} term of an arithmetic progression $a_n=24-3n$, then it's 2^{nd} term is A. 18 B. 15 C. 0 D. 2 **Answer: A**

2. The lines represented by 2x+3y-9 =0 and

4x+6y-18=0 are

A. Intersecting lines

- B. Perpendicular lines to each other
- C. Parallel lines
- D. Coincident lines

Answer: C::D

3. A straigth line which passess through two

points on a circle is

A. a chord

B. a secant

C. a tangent

D. the radius

Answer: A::C

4. If the area of circle is 49π sq. units then it's

perimeter is

A. 7π units

B. 9π units

C. 14π units

D. 49π units

Answer: A::D

5. "The product of two consecutive positive integers is 30". This can be expressed algebraically as.

A. x (
$$x + 2$$
) = 30

B. x (x - 2) = 30

D. x (x + 1) = 30

Answer: A::C



6. If a and b are any two positive integers then HCF (a,b) \times LCM (a,b) is equal to

A. a + b

B. a - b

 $\mathsf{C}.\,a\times b$

 $\mathsf{D}.\,a\div b$

Answer: A::B

7. $\cos 48^{\circ} - \sin 42^{\circ} = ?$

A. 0
B.
$$\frac{1}{4}$$

C. $\frac{1}{2}$

Answer:



8. If P(A)=0.05 the $Pig(\overline{A}ig)$ is

A. 0.59

 $\mathsf{B}.\,0.95$

C. 1

 $D.\,1.05$

Answer:

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Answer The Following

 The given graph represents a pair of linear equations in two variables. Write how many solutions these pair of equations have.





2. 17 = 6×2 +5 is compared with Euclid's

Division lemma a = bq +r then which number is

representing the remainder



3. Write the degree of the polynomial P(x) = $2x^2 - x^3 + 5$.

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4. Find the value of the discriminant of the quadratic equation $2x^2 - 4x + 3 = 0$

5. Write the foumula to calculate the curved

surface area of the frustum of a cone.



6. Find the sum of first twenty terms of Arithmetic series $2 + 7 + 12 + \cdots$ using suitable formula.

7. In ΔABC , $DE \mid BC$. If AD = 5 cm ,BD = 7

cm and AC = 18 cm, find the length of AE.



OR

In the given figure if PQ ||RS, prove that $\Delta POQ \sim \Delta SOR$.



8. Solve the following pair of linear equations

by any suitable method.

x+y = 5 2x-3y=5



9. In the figure, ABCD is a square of side 14 cm. A, B, C and Dare the centres of four congruent circles such that each circle touches externally two of the remaining three circles. Find the area of the shaded region.





10. Draw a circle of radius 4 cm and construct

a pair of tangents such that the angle between them is $60^{\,\circ}$.



11. Find the co - ordinates of points which divides the line segment joining the points A (4, -3) and B (8,5) in the ratio 3:1 internally



12. Prove that $3+\sqrt{5}$ is an irrational number.



13. The sum and product of the zeroes an a quadratic polynomial P (x) = $ax^2 + bx + c$ are

-3 and 2 respectively, Show that b+c = 5a.

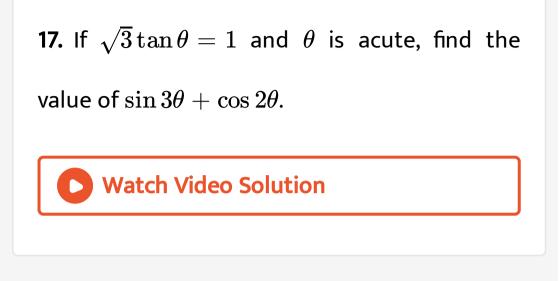


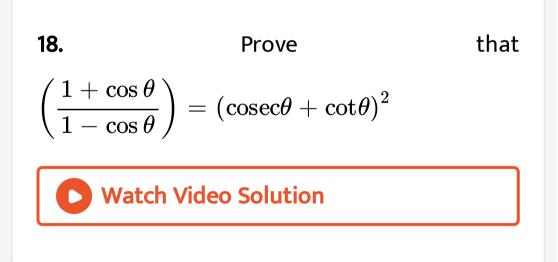
14. Find the quotient and the remainder when P (x) = $3x^3 + x^2 + 2x + 5$ is divided by g(x) = x^2 +2x+1.

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15. Solve 2x^2-5x+3 = 0 by using formula.
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16. The length of a rectangular field is 3 time its breadth . If the area of the field is 147 sq.m, find its length and breadth.





19. A cubical die numbered from 1 to 6 are rolled twice . Find the probability of getting the sum of numbers on its faces is 10 .



20. The radii of two circular ends of a frustum of a cone shaped dustbin are 15 cm and 18 cm . If its depth is 63 cm find the volume of the dustbin



21. Prove that "the lengths of tangents drawn from an external point to a circle are equal". OR

In the given figure PQ and RS are two parallel tangents to a circle with centre O and another tangent AB with point of contact C intersecting PQ at A and RS at B. Prove that $\angle AOB = 90^{\circ}$.



22. Calculate the median of the following frequency distribution table :



OR

Calculate the mode for the following

frequency distribution table.



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23. The seventh term of an arithmetic progression is four times itss second term and

twelth term is 2 more than three times of its

fourth term. Find the progression.



24. The vertices of a $\triangle ABC$ are A(-5,-1) B(3.-5), C-(5.2).Show that the area of the $\triangle ABC$ is four times the area of the triangle formed by joining the mid-points of the sides of the triangle ABC.



25. Construct a triangle with sides 5 cm, 6 cm and 7 cm and then another triangle whose sides are $\frac{7}{5}$ of the corresponding sides of the first triangle.



26. Find the sol.n of the following pair of linear

by the graphical method.

2x + y = 6

2x - y = 2

27. The angle of elevation of the top of a tower from two points at a distance of 4m and 9 m from the base of the tower and in the same straight line with it are complementary. Prove that the height of the tower is 6m.

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28. The bottom of a right cylindrical shaped vessel made from metallic sheet is dosed by a

cone shaped vessel as r shown in the figure. The radius of the circular base of the cylinder and radius of the circular base of the cone are each is equal to 7 cm. If t~e height of the cylinder is 20 cm and height of cone is 3 cm, calculate the cost of milk to fill completely this vessel at the rate of Rs. 20 per litre.



OR

A hemispherical vessel of radius 14 cm is fully filled with sand . This sand is poured on a level ground . The heap of sand forms a cone shape of height 7 cm . Calculate the area of ground occupied by the circular base of the heap of

the sand .



29. Prove that "the ratio of the areas of two similar triangles is equal to the square of the ratio of their corresponding sides".

