# 10 ${ }^{\text {th }}$ CLASS MARCH - 2020 <br> MATHS - I 

## I. Aa Answer ALL the following questions :

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www. Mana WWrite prime factorization of 140. (Wwn Manabadi.co.in
2. nabWhat is the nature of roots if $\mathrm{b}^{2}=4 \mathrm{ac}=0$.
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3. nalif $A$ and $B$ are disjoint sets, then how can you find $n(A d B)$.
4. Expand $\log \frac{p^{2} q^{3}}{r}$
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$\qquad$
5. Find curved surface area of cylinder whose radius and height are $14 \mathrm{~cm}, 21 \mathrm{~cm}$ respectively.
6. If $2 x+3 y=12$ and $x-y-1=0$ then find value of $x$.
7. How many solutions to the pair of equations $x+2 y+5=0$ and $-3 x-6 y+1=0$ write without doing actual process.
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8 analWrite how many zeros of the polynomial from the given figure
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9. nala the numbers in the list are $P, \frac{4 P}{3}, \frac{5 P}{3}, \ldots \ldots$. . find $6{ }^{\text {the }}$ term.

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www. 10. na bVolume of cone is $288 \pi \mathrm{~cm}^{3}$ and radius is 6 cm . the find its height
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www. 111.na WWrite set builder form for $\{2,4,8,16,32\}$..w. Manabadi co in
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12. na Cheek whether $(x-1)^{2}=2 x-6$ is Quadratic equation (or)not?
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II. . anab Answer ALL the following questions.
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13. na If $A=\{1,2,3\}, B=\{2,3,4\}$ find $A-B$ and $B-A$.
14. ${ }_{\text {If }} a=+5, d=3, n=4$ find $S_{4}$.
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15. Check whether $1,-3$ are zeros of the polynomial $P(x)=x^{3}-1$ (or) not.
www. 16. Length, Breadth and height of cuboids are $6 \mathrm{~cm}, 4 \mathrm{~cm}, 2 \mathrm{~cm}$. respectively. Find its volume.
WWW. 17. Write $9^{\text {th }}$ term of the series $3,9,27,81 \ldots \ldots$.
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18. If $\log _{5}^{625}=x$ find x . www.Manabadi.co.i www.Manabadi.co.in
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www.Manabadl $\log _{5}^{52}=x$ find X . $=x$ anabadi.co.in www.Manabadi.co.in www. Manabadi.co.in www.Manabadi.co.in

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19.nal The cost of each Maths text book is 'Y. The cost of each English book is ${ }^{\prime} Z$. if a shopkeeper purchased 15 Maths books and 12 English books and paid 5400. Write the linear equation for given data.
20. na Find the total surface Area of hemisphere whose radius is 4.9 cm .
III. Answer all the following Questions
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WWW. $8 \times 2=16 \mathrm{M}$
21. Write $2 \log 3+3 \log 5-5 \log 2$ as a single logarithm.

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22. Find Quadratic polynomial with zeros $2,-1$.
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23. na Solve the equations $2 x-y=5,3 x+2 y=11$ by using substitution method
24. Find the nature of roots of Quadratic equation $2 x^{2}-3 x+5=0$. If real roots exists find them.
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Www. 25. na Determine the A.P. whose $3^{\text {rd }}$ term is 5 and $7^{\text {th }}$ term is 9.
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26. A sphere, a cylinder and a cone are of the same radius and same height. Find ratio of their carved

WWW. IVana Surface Areas
27. Find $20^{\text {th }}$ and $\mathrm{n}^{\text {th }}$ term of the G.P
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Wurw Manabadi.co.in $\frac{5}{2}, \frac{5}{4}, \frac{5}{8}, \ldots \ldots \ldots \ldots$.
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WWW. 28. A cylinder and a cone have bases of equal radii and are of equal heights. Show that their volumes are in the
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WWW III. Answer the following Questions!
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$5 \times 4=20 \mathrm{M}$
WWW. 29. a) A cylindrical container is filled with ice cream whose diameter is 12 cm and height is 15 cm . The whole ice www. Manabad cream is distributed to 10 children in equal cones having hemispherical tops. If the height of the conical www. Manabadi.coin whw is twice the diameter of its base, find the diameter of ice cream cone.
(or)
b) 200 logs are stocked in the following manner. 20 logs in the bottom row, 19 in the next row, 18 in the row next to it. In how many rows the logs placed and find no.of logs in top row.
30. a) Find the roots of the equation $5 x^{2}-6 x-2=0$ by the method of completing the square.

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b) How many silver coins 1.75 cm in diameter and thickness 2 mm , need to be melted to form a cuboid of dimensions $5.5 \mathrm{~cm} \times 10 \mathrm{~cm} \times 3.5 \mathrm{~cm}$ ?
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31 na) Prove that $\sqrt{3}+\sqrt{5}$ is an irrational number
(or)
b) Verify that $1,-1,-3$ are the zeroes of the cubic polynomial $x^{3}+3 x^{2}-x-3$ and check the relationship between zeroes and co-efficients.
32. a) If $A=\{x: x$ is a natural number $\}$

$$
B=\{x: x \text { is an even natural number }\}
$$

$C=\{x: x$ is an odd natural number $\}$
$D=\{x ; x$ is a prime number $\}$

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iii) $A \cap D$
i. iv) $C \cap D$
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## (or)

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www. Manabadi.co. in www. Manabadi. $\frac{1}{2}$ in ww. Manabadi.co. in www. Manabadi.co. in www. Manabadi. $n(n-3)$ diagonals. How many sides will a polygon having 65 diagonals. Is
www. Manabadi. poly of ' $n$ ' sides has $\frac{n}{2}(n w$. Manabadi.

## www. Manabad there any polygon with 50 diagonals.

www. 33. a) Draw the graphs of given polynomial and find zeros. Justify your Answer.
www. Manalp $P(x)=x^{2}-x-12$
www.Manabadi.co.in www.Manabadi.co.in www.Man (or)
b) Check whether the following equations are consistent (or) Inconsistent. Solve them graphically.

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    www. Manabadi.co $\begin{aligned} & 3 x+2 y=8 \\ & 2 x-3 y=1\end{aligned}$
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