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| Description: Description: logo | **INDIA INTERNATIONAL SCHOOL-MANGAF**  **HOLIDAY HOMEWORK– 2018-2019**  **CLASS-XI**  **SUBJECT – MATHEMATICS** |

1. Solve sinxtanx-1=tanx-sinx.
2. Prove that =tan4A.
3. Solve 3tanx+cotx=5cosecx
4. Solve
5. Solve tanx+tan2x+tanxtan2x=
6. S.T sin10sin50sin60sin70=.
7. If xcos) =z cos+),prove that yz+yx+xy=0.
8. P.T =tanx.
9. Prove that cot4x (sin5x+sin3x)=cotx(sin5x-sin3x).
10. If are distinct roots of a cos+6sin=c, prove that sin ()=.
11. If tan = tan,prove that cos=.
12. Cos2A+cos3(120+A)+cos3(240+A)=cos3A.
13. Prove that = 2cos
14. Prove that =.
15. Prove that; tan6
16. Prove that tan5
17. Show that (i) cot- 3cot=.
18. If a tan , where, bcos
19. If are acute angles such that tan & tan=.

Then =.

1. S.T (i) tan72=tan18+2tan54

(ii) Tan56=

1. S.T [1+cot ][1+cot]=2cot.
2. Prove that if A, B, CA=C.
3. Two finite sets have m & n sets. The number of subsets of the first set is ½more than that of the second set. Find the value of m & n.
4. Let A= , B= C= and D= . Find (i) A-B, (ii) A-C , (iii) A-D , (iv) B-A , (v) C-A , (vi) D-A , (vii) B-C , (viii) B-D , (ix) C-B , (x) D-B , (xi) C-D
5. In the survey of 100 person it was found that 28 read magazine A, 30 read magazine B , 42 read magazine C ,8 read magazine A and B, 10 read magazine A and C, 5 read magazine B and C, 3 read all three magazines?

(i)How many read none of the three magazines?

(ii)How many read magazine C only?

(iii)How many read magazine A only?

1. In a survey it was found that 21 people liked product A, 26 liked B & 29 liked product C. 14 people liked product A&B;12 people liked product C&A;14 people liked product B&C and 3 liked all three products . find how many liked product C only.?
2. A class has 175 students. The following description gives the number of students studying one or more of the subjects in this class.

Mathematics 100; Physics 70; Chemistry 46; Mathematics and Physics 30; Mathematics and chemistry 28; physics and chemistry 23; Mathematics, Physics and Chemistry 18.

1. Find (i) how many students are enrolled in Mathematics alone; Physics alone and Chemistry alone

(ii) the number of students who have not offered any of these subjects

1. Using Venn diagram, prove the following

(i) **A (BC) = (A**

(ii) **A**

1. Solve the following inequalities graphically.

2x +y 24

x + y 11

2x + 5y40, x, y

1. Solve the following inequalities graphically

x+ 2y 10

x + y

x – y 0, x, y

1. Prove that + + = - sin 3x
2. Find sin , cos and tan if sin x = , x is in quadrant II