

# Mahaveer Public School

Session -2021-22

Holiday Home Work

## CLASS XI- SCIENCE

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### Point to Remember

- Holiday homework will be assessed on certain parameters and marks will be awarded accordingly
- Last date of submission is **05 July 2021**. No submission will be accepted after the due date.
- Mode of submission:- It must be submitted on the team app only in the assignment tab subject wise
- How to submit-
  1. Take the clear picture of work done
  2. Make a pdf and give the name of the pdf in this form Your scholar no.

Your name \_Sub (eg. 2030rohan\_maths.pdf) Upload this file on the team app)

## CHEMISTRY

1. Unit -1- Basic concepts of Chemistry – All NCERT Text book Exercises questions.
2. Investigatory Project- (On any Topic of chemistry from Chemistry practical book.
3. Prepare a power point presentation on Unit 1 as per following distribution:

Class XIA	Class -XIB
Roll No-1to15 (Laws of chemical combination)	Roll No-1to13 (Laws of chemical combination)
Roll No-16to30 (Mole Concept, Limiting Reagent)	Roll No-14to26 (Mole Concept, Limiting Reagent)
Roll No-31to45 Emperical/Molecular Formula,Concentration terms	

## BIOLOGY

1. Draw the diagram of human digestive system, write the different enzymes secreted by different parts of the alimentary canal and their action on different components of food.
2. Draw a neat and a well-labeled diagram of the following in the notebook –
  - a) Different parts of the human stomach
  - b) Types of teeth and their arrangement in the jaw
  - c) Duct system pouring into the duodenum
  - d) T.S. of alimentary canal
  - e) Exchange of gases – O<sub>2</sub> and CO<sub>2</sub> in alveolus and capillaries
3. Write a brief note on the disorders of digestive and respiratory system.
4. Explain the process of regulation of respiration.

## PHYSICS

1. Make notes of chapter no. 2 (NCERT): Units & Dimensions and Chapter no. 3 (NCERT): Motion In A Plane. (In Notes copy)
2. Solve Numericals of chapters no. 2 and 3 from NCERT and any other reference books. (In numerical copy)
3. Solve the worksheets (uploaded in MS Teams)
4. Make an investigatory project basis on 'CORONA VIROUS AND ITS EFFECTS'. (Project must be in form of a brief write up only.)

## Informatics Practices

Q1. Answer the following questions.

1. What do you mean by database?
2. What do you mean by DBMS?
3. What do you mean by RDBMS? Who introduced the concept of RDBMS?
4. What are the different types of DBMS?
5. What are the different types of SQL Command?
6. Name the different commands of DDL category.
7. Name the different commands of DML category.
8. Which SQL command is used to add a record in a table?
9. Which SQL command is used to change the value of a column in a table?
10. Which SQL command is used to remove a record from a table?
11. Which SQL command is used to remove a column from the table?
12. Which SQL command is used to view records of a table?
13. Which clause is used to arrange the records of a table in ascending or descending order?
14. Write examples of popular RDBMS.
15. Which key helps to identify a record uniquely in a table?
16. What do you mean by cardinality?
17. What do you mean by degree?
18. What do you mean by View?
19. What do you mean by Referential Integrity?
20. What is an alternate key?

Q2. Consider the following tables PRODUCT and CLIENT under the database DEPARTMENTAL.

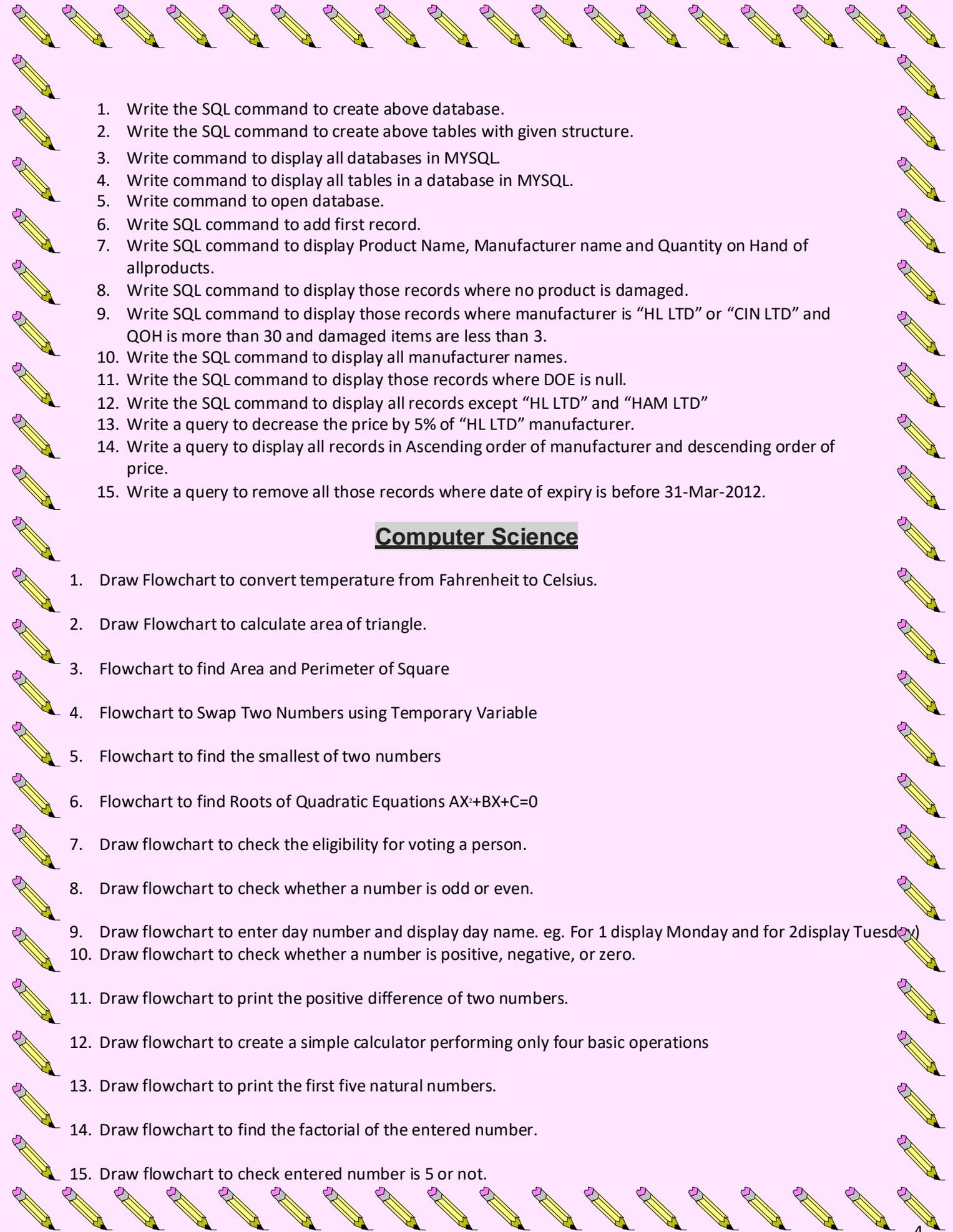
Consider the following structure and data in it.

FieldName	Data Type	Constraint/Description
ProductID	Varchar(8)	Primary Key
ProductName	Varchar (20)	Not Null
Manufacturer	Varchar (20)	
DOM	Date	Date of Manufacturing
DOE	Date	Date of Expiry
Price	Int	Default 0
QOH	Int	Check QOH>20
Damage	Int	

Enter the following records in the table

**Table: PRODUCT**

ProductID	ProductName	Manufacturer	DOM	DOE	Price	QOH	Damage
P001	JO	HL LTD	2010-06-01	2012-06-01	24	50	4
P002	LUX	HL LTD	2010-08-25	2012-08-25	26	34	2
P003	CINTHOL	CIN LTD	2010-11-20	2011-11-20	22	28	6
P004	HAMAM	HAM LTD	2010-03-12	2011-03-12	15	45	9
P005	OK	ABC LTD	2010-06-01	2013-06-01	12	39	0
P006	LIRIL	LIR LTD	2010-05-05	NULL	32	80	4
P007	MOTI	MOT LTD	2010-05-05	2010-05-05	38	50	2
P008	PEARS	PEA LTD	2010-02-01	2014-02-01	34	40	0
P009	GLORY	GLO LTD	2010-06-01	NULL	16	25	0
P010	SANTOOR	SAN LTD	2010-01-01	2010-06-30	17	12	NULL

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1. Write the SQL command to create above database.
  2. Write the SQL command to create above tables with given structure.
  3. Write command to display all databases in MYSQL.
  4. Write command to display all tables in a database in MYSQL.
  5. Write command to open database.
  6. Write SQL command to add first record.
  7. Write SQL command to display Product Name, Manufacturer name and Quantity on Hand of all products.
  8. Write SQL command to display those records where no product is damaged.
  9. Write SQL command to display those records where manufacturer is "HL LTD" or "CIN LTD" and QOH is more than 30 and damaged items are less than 3.
  10. Write the SQL command to display all manufacturer names.
  11. Write the SQL command to display those records where DOE is null.
  12. Write the SQL command to display all records except "HL LTD" and "HAM LTD"
  13. Write a query to decrease the price by 5% of "HL LTD" manufacturer.
  14. Write a query to display all records in Ascending order of manufacturer and descending order of price.
  15. Write a query to remove all those records where date of expiry is before 31-Mar-2012.

## **Computer Science**

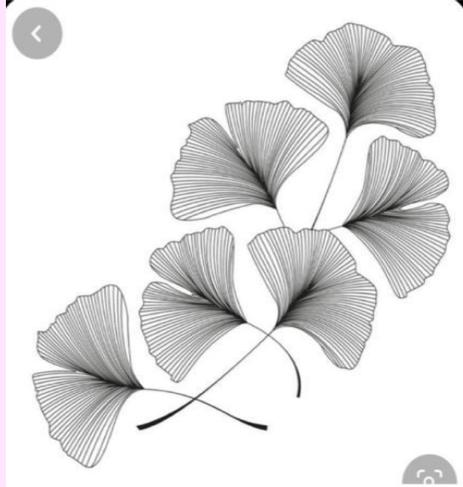
1. Draw Flowchart to convert temperature from Fahrenheit to Celsius.
2. Draw Flowchart to calculate area of triangle.
3. Flowchart to find Area and Perimeter of Square
4. Flowchart to Swap Two Numbers using Temporary Variable
5. Flowchart to find the smallest of two numbers
6. Flowchart to find Roots of Quadratic Equations  $AX^2+BX+C=0$
7. Draw flowchart to check the eligibility for voting a person.
8. Draw flowchart to check whether a number is odd or even.
9. Draw flowchart to enter day number and display day name. eg. For 1 display Monday and for 2 display Tuesday)
10. Draw flowchart to check whether a number is positive, negative, or zero.
11. Draw flowchart to print the positive difference of two numbers.
12. Draw flowchart to create a simple calculator performing only four basic operations
13. Draw flowchart to print the first five natural numbers.
14. Draw flowchart to find the factorial of the entered number.
15. Draw flowchart to check entered number is 5 or not.

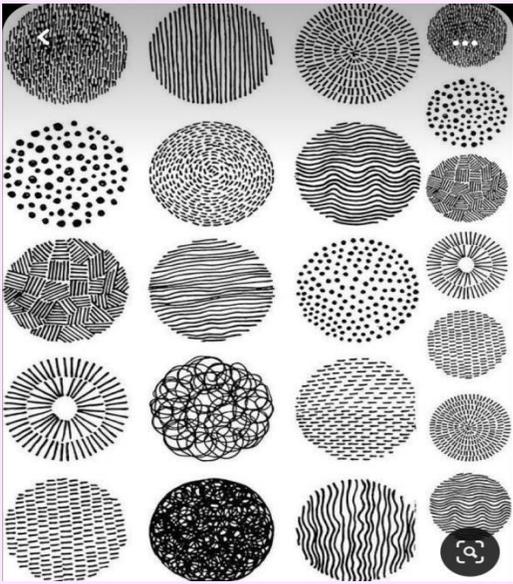
## APPLIED ART

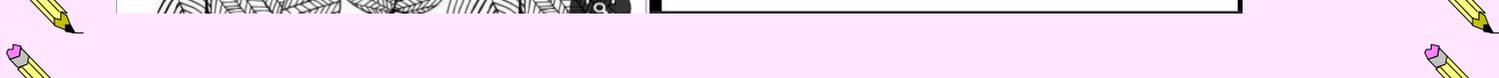
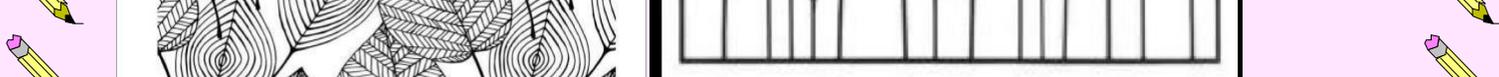
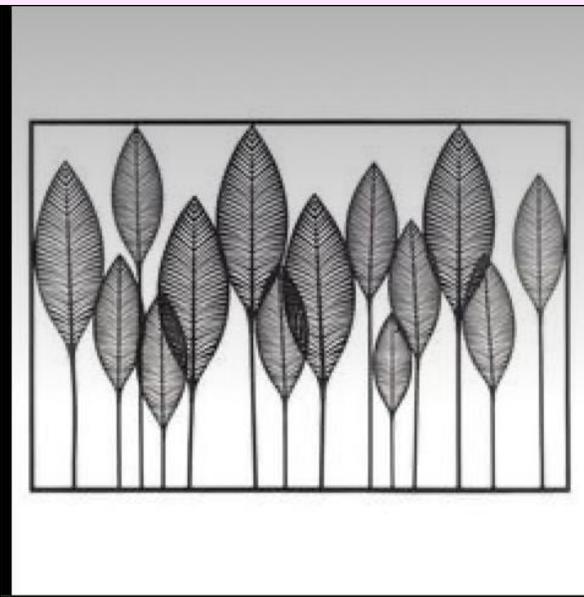
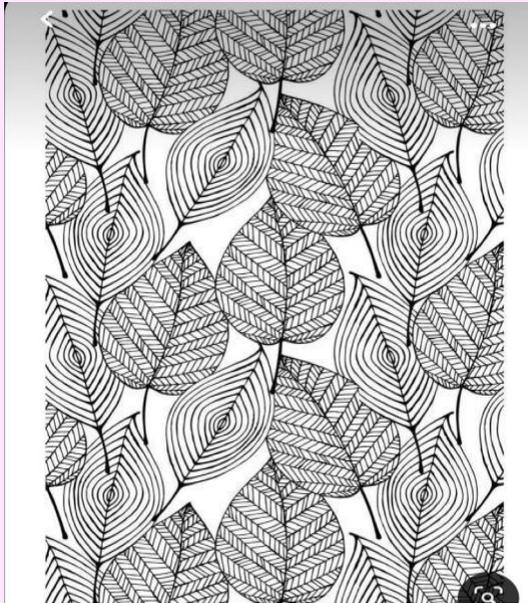
\*Practice of still life (sample pdf will be shared separately)

\*Practice of Linear drawings

\*2 sketches practice everyday in sketching file







## PHYSICAL EDUCATION

**Make a full chart or Power point presentation (10-12 slides): Any one game of your choice (Athletics, Basketball, Volleyball, Cricket, Yoga.)**

- History of the game
- Labeled diagram of court, field, and Track and Field with dimensions.
- Rules and regulations of the game.
- Terminologies of the game
- Fundamental skill of the game
- Any five personalities of the game

## ENGLISH

- Read any contemporary fiction of your choice and write up a book review in about 200 words.
- Prepare a pictorial PPT on the chapter - The Portrait of a Lady.

\*\* Do the review in the class notebook.

## Mathematics

Write all these formulae on chart paper and learn.

sin PH cosec cos BH sec tan PB cot	$\sin\theta \cdot \text{cosec}\theta = 1 < \text{cosec}\theta = \frac{1}{\sin\theta}$ $n\theta = \frac{1}{\text{cosec}\theta}$	$\cos\theta \cdot \text{sec}\theta = 1 < \text{sec}\theta = \frac{1}{\cos\theta}$ $o\theta = \frac{1}{\text{sec}\theta}$	$\tan\theta \cdot \text{cot}\theta = 1 < \text{cot}\theta = \frac{1}{\tan\theta}$ $an\theta = \frac{1}{\text{cot}\theta}$
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$\tan \theta = \frac{\sin \theta}{\cos \theta}$ ,  $\cot \theta = \frac{\cos \theta}{\sin \theta}$ ,  $\sin^2\theta + \cos^2\theta = 1$ ,  $\cos^2\theta = 1 - \sin^2\theta$ ,  $\sin^2\theta = 1 - \cos^2\theta$ ,  $1 + \tan^2\theta = \sec^2\theta$ ,  $\sec^2\theta - \tan^2\theta = 1$ ,  $1 + \cot^2\theta = \text{cosec}^2\theta$ ,  $\text{cosec}^2\theta - \cot^2\theta = 1$

	0°	30°	45°	60°	90°	120°	135°	150°	180°
	0	6	4	3	2	2π3	3π4	5π6	
sin	0	1/2	1/√2	√3/2	1	3/2	1/√2	1/2	0
cos	1	√3/2	1/√2	1/2	0	-1/2	-1/√2	-3/4	-1
tan	0	1/√3	1	√3		-√3	-1	-1/√3	0
cot		√3	1	1/√3	0	-1/√3	-1	-√3	-∞
sec	1	2/√3	2	2/√3		-2	-2/√3	-2	-1
cosec		2	√2	2/√3	1	2/√3	√2	2	

$\sin A+B = \sin A \cos B + \cos A \sin B$ $\sin A-B = \sin A \cos B - \cos A \sin B$ $\cos A+B = \cos A \cos B - \sin A \sin B$ $\cos A-B = \cos A \cos B + \sin A \sin B$ $\tan A+B = \frac{\tan A + \tan B}{1 - \tan A \tan B}$ $\tan A-B = \frac{\tan A - \tan B}{1 + \tan A \tan B}$ $\tan 4+x = 1 + \tan x \cdot \frac{1}{1 + \tan x}$ $\cot A \pm B = \frac{\cot A \cot B \mp 1}{\cot B \pm \cot A}$ $\sin 2A = 2 \sin A \cos A$ $\sin 2A = 2 \tan A / (1 + \tan^2 A)$ $\tan 2A = \frac{2 \tan A}{1 - \tan^2 A}$
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$\cos 2A = \cos^2 A - \sin^2 A$ $= 2 \cos^2 A - 1$ $= 1 - 2 \sin^2 A$ $= \frac{1 - \tan^2 A}{1 + \tan^2 A}$ $1 + \cos 2A = 2 \cos^2 A$ $1 - \cos 2A = 2 \sin^2 A$ $\sin 3A = 3 \sin A - 4 \sin^3 A$ $\cos 3A = 4 \cos^3 A - 3 \cos A$ $\tan 3A = \frac{3 \tan A - \tan^3 A}{1 - 3 \tan^2 A}$
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$\sin 18^\circ = \frac{\sqrt{5} - 1}{4} = \cos 72^\circ$   
 $\sin 36^\circ = \frac{\sqrt{10} - 2\sqrt{5} + 4}{4} = \cos 54^\circ$   
 $\sin 54^\circ = \frac{\sqrt{5} + 1}{4} = \cos 36^\circ$   
 $\sin 72^\circ = \frac{\sqrt{10} + 2\sqrt{5}}{4} = \cos 18^\circ$

$\sin C + \sin D = 2 \sin \frac{C+D}{2} \cos \frac{C-D}{2}$ $\sin C - \sin D = 2 \cos \frac{C+D}{2} \sin \frac{C-D}{2}$ $\cos C + \cos D = 2 \cos \frac{C+D}{2} \cos \frac{C-D}{2}$ $\cos C - \cos D = -2 \sin \frac{C+D}{2} \sin \frac{C-D}{2}$	$2 \sin A \cos B = \sin A+B + \sin A-B$ $2 \cos A \sin B = \sin A+B - \sin A-B$ $2 \cos A \cos B = \cos A+B + \cos A-B$ $2 \sin A \sin B = \cos A-B - \cos A+B$ $A+B \cos A-B = A-B$ $A+B \sin A-B = A-B$
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$\sin \theta = 0 \Rightarrow \theta = n\pi$ $\tan \theta = 0 \Rightarrow \theta = n\pi$ $\cos \theta = 0 \Rightarrow \theta = 2n\pi + \frac{\pi}{2}$	$\sin \theta = \sin \alpha \Rightarrow \theta = n\pi + \alpha$ $\cos \theta = \cos \alpha \Rightarrow \theta = 2n\pi \pm \alpha$ $\tan \theta = \tan \alpha \Rightarrow \theta = n\pi + \alpha$
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