TITIAN

Personal Memoranda

Name:

Address:

Residence Tel. No: H/P No:

E-mail:

Identity Card No: Passport No:

Income Tax No:

Bank Account No:

Credit Card No:

Driver's License No:

Insurance Policy No:

Blood Type: Doctor Tel. No:

Dentist Tel. No: Airport:

Business Company:

Address:

Telephone No: Fax No:

Telex No: E-mail:

Cable Address:

In Case Of Emergency, notify:

Name:

Address:

Residence Tel. No: H/P:

TITIAN

CALENDAR 2023

JANUARY

M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

January, 1 . New Year's Day
January, 22 . Chinese New Year's Day

FEBRUARY

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

February, 18 . Isra' Mi'raj

MARCH

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

March, 22 . Saka New Year (Nyepi)

APRIL

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

April, 7 . Good Friday
April, 22-23 . Eid al-Fitr 1444 H

MAY

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

May, 1 . International Labour Day
May, 18 . Ascension Day of Jesus Christ

JUNE

M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

June, 1 . Pancasila Day | June, 4 . Vesak Day
June, 29 . Eid al-Adha 1444 H

JULY

M	T	W	T	F	S	S
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3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

July, 19 . Islamic New Year 1445 H

AUGUST

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

August, 17 . Indonesian Independence Day

SEPTEMBER

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

September, 28 . Birth of Prophet Muhammad SAW

OCTOBER

M	T	W	T	F	S	S
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2	3	4	5	6	7	8
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23	24	25	26	27	28	29
30	31					

NOVEMBER

M	T	W	T	F	S	S
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20	21	22	23	24	25	26
27	28	29	30			

DECEMBER

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

December, 25 . Christmas Day

TITIAN

CALENDAR 2024

JANUARY

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

M	T	W	T	F	S	S
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19	20	21	22	23	24	25
26	27	28	29			

MARCH

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

APRIL

M	T	W	T	F	S	S
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8	9	10	11	12	13	14
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29	30					

MAY

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6	7	8	9	10	11	12
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20	21	22	23	24	25	26
27	28	29	30	31		

JUNE

M	T	W	T	F	S	S
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3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JULY

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

AUGUST

M	T	W	T	F	S	S
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5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

SEPTEMBER

M	T	W	T	F	S	S
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
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OCTOBER

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

DECEMBER

M	T	W	T	F	S	S
						1
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

TITIAN

CALENDAR 2025

JANUARY

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

FEBRUARY

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

MARCH

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

APRIL

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

MAY

M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE

M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

JULY

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

AUGUST

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

SEPTEMBER

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

OCTOBER

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
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NOVEMBER

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
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DECEMBER

M	T	W	T	F	S	S
1	2	3	4	5	6	7
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15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

TITIAN

CONVERSION FACTORS

Multiply	*By*	*To Obtain*
Acree	43,560.	Square Feet
Acree	4,047.	Square Meters
Acree	160.	Square Rods
Acree	5,645.4	Square Varas (Texas)
Acree	.4047	Hectares
Acree Foot	7,758.	Barrels
Atmospheres	76.0	Cms. of Mercury
Atmospheres	760.0	Milimeters of Mercury
Atmospheres	29.92	Inches of Mercury
Atmospheres	33.90	Feet of Water
Atmospheres	1.0333	Kgs./Sq. Cm
Atmospheres	14.70	Lbs/Sq. Inch
Atmospheres	1.058	Tons/Sq. Ft.
Barrel	5.6146	Cubic Feet
Barrel	.15897	Cubic Meters
Barrel Oil	42.	Galoons-Oil
Barrel of Water	.1588	Metric Ton
Barrel (36°A.P.I)	.1342	Metric Ton
Barrel per Hour	.0936	Cu. Ft. per Minute
Barrel per Hour	.700	Gallon per Minute
Barrel per Hour	2.695	Cu. In. per Second
Barrel per Day	.02917	Gallon per Minute
Bars	.9869	Atmospheres
Bars	2089.	Lbs./Sq. Foot
Bars	14.50	Lbs./Sq. Inc
British Thermal Units	0.2520	Kilogram-Calories
British Thermal Units	.2928	Watt Hour
British Thermal Units	777.5	Foot-Lbs
British Thermal Units	.0003927	Horsepower-hours
British Thermal Units	107.5	Kilogram-meters
British Thermal Units	.0002928	Kilowatt-hours
B.T.U./min	12.96	Foot-lbs/sec.
B.T.U./min	.02356	Horsepower
B.T.U./min	.01757	Kilowatts
B.T.U./min	17.57	Watts
Centares (Centaires)	1.	Square Meters
Centigrams	.01	Grams
Centiliters	.01	Liters
Centimeters	.3937	Inches
Centimeters	.01	Meters
Centimeters	10.	Milimeters
Centimeters of Mercury	.01316	Atmospheres
Centimeters of Mercury	.4461	Feet of Water
Centimeters of Mercury	136.0	Kgs./Sq. Meter
Centimeters of Mercury	27.85	Lbs/Sq. Ft
Centimeters of Mercury	.1934	Lbs/Sq. Inch.
Centimeters/second	1.969	Feet/Min.
Centimeters/second	.03281	Feet/Sec
Centimeters/second	.036	Kilometers/Hrs

TITIAN

CONVERSION FACTORS

Multiply	*By*	*To Obtain*
Centimeters/Second	.6	Meter/Min
Centimeters/Second	.02237	Miles/Hrs
Centimeters/Second	.0003728	Miles/Min
Centimeters/Second	.03281	Feet/Sec/Sec
Chain	66.00	Feet
Chain	4.00	Rods
Cubic Centimeters	.00003531	Cubic Feet
Cubic Centimeters	.06102	Cubic Inches
Cubic Centimeters	.0000010	Cubic Meters
Cubic Centimeters	.000001308	Cubic Yards
Cubic Centimeters	.0002624	Gallons
Cubic Centimeters	.001	Liters
Cubic Centimeters	.002113	Pints (Liq)
Cubic Centimeters	.001057	Quarts (Liq)
Cubic Feet	.1781	Barrels
Cubic Feet	28320.	Cubis Cms
Cubic Feet	1728.	Cubic Inches
Cubic Feet	.02832	Cubic Meters
Cubic Feet	.03704	Cubic Yards
Cubic Feet	7.48052	Gallons
Cubic Feet	28.32	Liters
Cubic Feet	59.84	Pints (Liq)
Cubic Feet	29.92	Quarts (Liq)
Cubic Feet/Minute	472.0	Cubic Cm/Sec.
Cubic Feet/Minute	.1247	Gallons/Sec.
Cubic Feet/Minute	.4720	Liters/Sec.
Cubic Feet/Minute	62.43	Lbs of Water/Min
Cubic Feet/Minute	10.686	Barrels per Hours
Cubic Feet/Minute	28.800	Cubic in per Sec
Cubic Feet/Second	.646317	Million Gals/Day
Cubic Feet/Second	448.831	Gallons/Minute
Cubic Inches	16.39	Cubic Centimeters
Cubic Inches	.0005787	Cubic Feet
Cubic Inches	.00001639	Cubic Meters
Cubic Inches	.00002143	Cubic Yards
Cubic Inches	.004329	Gallons
Cubic Inches	.01639	Liters
Cubic Inches	.03463	Pints (Liq)
Cubic Inches	.01732	Quards (Liq)
Cubic Meters	6.2905	Barrels
Cubic Meters	1,000,000.	Cubic Centimeters
Cubic Meters	35.31	Cubic Feet
Cubic Meters	61,023.	Cubic Inches
Cubic Meters	1.308	Cubic Yards
Cubic Meters	264.2	Gallons
Cubic Meters	1,000.	Liters
Cubic Meters	2,113.	Pints (Liq)
Cubic Meters	1,057.	Quards
Cubic Yards	4.8089	Barrels
Cubic Yards	764,600.	Cubic Centimeters
Cubic Yards	27.	Cubic Feet
Cubic Yards	46,656.	Cubic Inches
Cubic Yards	0.7646	Cubic Meters
Cubic Yards	202.0	Gallons

TITIAN

CONVERSION FACTORS

Multiply	*By*	*To Obtain*
Cubic Yards	764.6	Liters
Cubic Yards	1,616.	Pints (Liq)
Cubic Yards	807.9	Quarts (Liq)
Cubic Yards/Min	.45	Cubic Feet/Sec
Cubic Yards/Min	3.367	Gallons/Sec
Cubic Yards/Min	12.74	Liters/Sec
Decigrams	.1	Grams
Deciliters	.1	Liters
Decimeter	.1	Meters
Degrees (angle)	60.	Minutes
Degrees (angle)	.01745	Radians
Degrees (angle)	3,600.	Seconds
Degrees/Sec	.01745	Radians/Sec
Degrees/Sec	.1667	Revolutions/Min
Degrees/Sec	.002778	Revolutions/Sec
Dekagrams	10.	Gram
Dekaliters	10.	Liters
Dekameters	10.	Meters
Drams	27.34375	Grains
Drams	.0625	Ounces
Drams	1.771845	Grams
Fathoms	6.	Feet
Feet	30.48	Centimeters
Feet	12.	Inches
Feet	.3048	Meters
Feet	.3600	Varas (Texas)
Feet	1/3	Yards
Feet of Water	.02950	Atmospheres
Feet of Water	.8826	Inches of Mercury
Feet of Water	.03048	Kgs/Sq. Cm
Feet of Water	62.43	Lbs/Sq. Ft
Feet of Water	.4335	Lbs/Sq. In
Feet/Min	.5080	Centimeters/Sec
Feet/Min	.01667	Feet/Sec
Feet/Min	.01829	Kilometers/Min
Feet/Min	.3048	Meters/Min
Feet/Min	.01136	Miles/Hr
Feet/Sec	.68182	Miles/hour
Feet/Sec/Sec	30.48	Cms/Sec/Sec
Feet/Sec/Sec	.3048	Meters/Sec/Sec
Foot-pounds	.001286	British Thermal Units

TITIAN

CONVERSION FACTORS

Multiply	*By*	*To Obtain*
Foot-Pounds	.0000005050	Horsepower-Hrs
Foot-Pounds	.0003241	Kilogram-Calories
Foot-Pounds	.1383	Kilogram-Meters
Foot-Pounds	.0000003766	Kilowatt-Hrs
Foot-Pounds/Min	.001286	British Thermal Units/Min
Foot-Pounds/Min	.01667	Foot-Pounds/Sec
Foot-Pounds/Min	.00003030	Horsepower
Foot-Pounds/Min	.0003241	Kg-Calories/Min
Foot-Pounds/Min	.00002260	Kilowatts
Foot-Pounds/Sec	.07717	B.T. Units/Min
Foot-Pounds/Sec	.001818	Horsepower
Foot-Pounds/Sec	.01945	Kg-Calories/Min
Foot-Pounds/Sec	.001356	Kilowatts
Gallons (U.S.)	.02381	Barrel
Gallons (U.S.)	.83267	Gallons (Imperial)
Gallons	3,785.	Cubic Centimeters
Gallons	.1337	Cubic Feet
Gallons	231.	Cubic Inches
Gallons	.003785	Cubic Meters
Gallons	.00495	Cubic Yards
Gallons	3.785	Liters
Gallons	8.	Pints (Liq)
Gallons	4.	Quarts (Liq)
Gallons (Imperial)	1.20095	Gallons (U.S.)
Gallons (Imperial)	277.419	Cubic Inches
Gallons Water	8.3453	Pounds of Water
Gallons/Min	1.429	Barrel per Hour
Gallons/Min	.1337	Cu. Ft. per Minute
Gallons/Min	34.286	Barrels per Day
Gallons/Min	.06308	Liters/Sec
Gallons/Min	8.0208	Cu. Ft./Hr
Gallons/Min	.002228	Cu. Ft./Sec
Gallons of Water/Min	6.0086	Tons Water/24 Hrs
Grains (Troy)	1.	Grains (Avoir)
Grains (Troy)	.06480	Grams
Grains (Troy)	.04167	Pennyweights (Troy)
Grains (Troy)	.0020833	Ounces (Troy)
Grains/U.S. Gal	17.118	Parts/Million
Grains/U.S. Gal	142.86	Lbs./Million Gal
Grains/Imperial. Gal	14.286	Parts/Million
Grams	980.7	Dynes
Grams	15.43	Grains
Grams	.001	Kilograms
Grams	1,000.	Milligrams
Grams	.03527	Ounces (Avoir)
Grams	.03215	Ounces (Troy)
Grams	.002205	Pounds

CONVERSION FACTORS

Multiply	*By*	*To Obtain*
Grams/Cm	.0056	Pounds/Inch
Grams/Cu.Cm	62.43	Pounds/Cubic-Foot
Grams/Cu.Cm	.03613	Pounds/Cubic-Inch
Grams/Liter	58.417	Grains/Gals
Grams/Liter	8.345	Pounds/100 Gals
Grams/Liter	.062427	Pounds/Cubic-Foot
Grams/Liter	1,000.	Parts/Million
Hectare	2.471	Acres
Hectare	.010	Square Kilometer
Hectograms	100.	Grams
Hectoliters	100.	Liters
Hectowatts	100.	Watts
Horsepower	42.44	B.T.U/Min
Horsepower	33,000.	Foot-Lbs/Min
Horsepower	550.	Foot-Lbs/Sec
Horsepower	1.014	Horsepower (Metric)
Horsepower	10.70	Kg-Calories/Min
Horsepower	.7457	Kilowatts
Horsepower	745.7	Watts
Horsepower (Boiler)	33,479.	B.T.U/Hr
Horsepower (Boiler)	9.803	Kilowatts
Horsepower-Hours	2,547.	British Thermal Units
Horsepower-Hours	1,980,000.	Foot-Lbs
Horsepower-Hours	641.7	Kilogram-Calories
Horsepower-Hours	237,700.	Kilogram-Meters
Horsepower-Hours	.7457	Kilowatt-Hours
Inches	2.540	Centimeters
Inches of Mercury	.03342	Atmospheres
Inches of Mercury	1.133	Feet of Water
Inches of Mercury	.03453	Kgs/Sq.Cm
Inches of Mercury	.70.73	Lbs/Sg.Ft
Inches of Mercury	.4912	Lbs/Sg.In
Inches of Water	.0024658	Atmospheres
Inches of Water	.07355	Inches of Mercury
Inches of Water	.002540	Kgs/Sq.Cm
Inches of Water	.5781	Ounces/Sq.Inch
Inches of Water	5.202	Lbs/Sq.Ft
Inches of Water	.03613	Lbs/Sq.Inch
Kilograms	980,665.	Dynes
Kilograms	2.205	Lbs.
Kilograms	.001102	Tons (Short)
Kilograms	1,000.	Grams

TITIAN

CONVERSION FACTORS

Multiply	*By*	*To Obtain*
Kilograms-Meter	7.233	Ft.-Lbs
Kilograms-Meter	.6720	Lbs./Ft
Kilograms/Sq.Cm	.9678	Atmospheres
Kilograms/Sq.Cm	32.81	Feet of Water
Kilograms/Sq.Cm	28.96	Inches of Mercury
Kilograms/Sq.Cm	2,048.	Lbs./Sq. Foot
Kilograms/Sq.Cm	14.22	Lbs./Sq. Inch
Kgs/Sq.Millimeter	1,000,000.	Kgs./Sq.Meter
Kiloliters	1,000.	Liters
Kilometers	100,000.	Centimeters
Kilometers	3,281.	Feet
Kilometers	1,000.	Meters
Kilometers	.6214	Miles
Kilometers	.5396	Miles (Nautical)
Kilometers	1,094.	Yards
Kilometers/Hr	27.78	Centimeters/Sec
Kilometers/Hr	54.68	Feet/Min
Kilometers/Hr	.9113	Feet/Sec
Kilometers/Hr	.5396	Knots
Kilometers/Hr	16.67	Meters/Min
Kilometers/Hr	.6214	Miles/Hr
Kms./Hr.Sec	27.78	Cms/Sec/Sec
Kms./Hr.Sec	.9113	Ft./Sec./Sec
Kms./Hr.Sec	.2778	Meters/Sec./Sec
Kilowatts	56.92	British Thermal Units/Min
Kilowatts	44,250.	Foot-Lbs./Min
Kilowatts	737.6	Foot-Lbs./Sec
Kilowatts	1.341	Horsepower
Kilowatts	14.34	Kg-Calories/Min
Kilowatts	1,000.	Watts
Kilowatt-Hours	3,415.	British Thermal Units
Kilowatt-Hours	2,655,000.	Foot-Lbs
Kilowatt-Hours	1.341	Horsepower-Hrs
Kilowatt-Hours	860.5	Kilogram-Calories
Kilowatt-Hours	367,100.	Kilogram-Meters
Knot	1.	Nautical Miles per Hour
Knot	1.151	Statute Mile per Hour
Link (Surveyor's)	7.92	Inches
Liters	1,000.	Cubic Centimeter
Liters	.03531	Cubic Feet
Liters	61.02	Cubic Inches
Liters	.001	Cubic Meters
Liters	.001308	Cubic Yards
Liters	.2642	Gallons
Liters	2.113	Pints (Liq)
Liters	1.057	Quarts (Liq)
Liters/Min	.0005886	Cubic Ft./Sec
Liters/Min	.004403	Gals./Sec

TITIAN

CONVERSION FACTORS

Multiply	*By*	*To Obtain*
Width (in.) x thickness (in.) / 12	Length (ft.)	Board Feet
Meters	100.	Centimeters
Meters	3.281	Feet
Meters	39.37	Inches
Meters	.001	Kilometers
Meters	1,000.	Milimeters
Meters	1.094	Yards
Meters/Min.	1.667	Centimeters/Sec.
Meters/Min.	3.281	Feet/Min
Meters/Min.	.05468	Feet/Sec
Meters/Min.	.06	Kilometers/Hr
Meters/Min.	.03728	Miles/Hr
Meters/Sec.	196.8	Feet/Min
Meters/Sec.	3.281	Feet/Sec
Meters/Sec.	3.6	Kilometers/Hr
Meters/Sec.	.06	Kilometers/Min
Meters/Sec.	2.237	Miles/Hr
Meters/Sec.	.03728	Miles/Min
Microns	.0000010	Meters
Miles	160,900.	Centimeters
Miles	5,280.	Feet
Miles	1.609	Kilometers
Miles	1,760.	Yards
Miles	1,900.8	Varas (Texas)
Mile (Nautical)	6080.27	Feet
Mile (Nautical)	1.15	Mile (Statute)
Miles/Hr.	44.70	Centimeters/Sec
Miles/Hr.	88.	Feet/Min
Miles/Hr.	1.467	Feet/Sec
Miles/Hr.	1.609	Kilometers/Hrs
Miles/Hr.	.8684	Knots
Miles/Hr.	26.82	Meters/Min
Miles/Min	2,682.	Centimeters/Sec
Miles/Min	88.	Feet/Sec
Miles/Min	1.609	Kilometers/Hrs
Miles/Min	60.	Miles/Hr
Milliers	1,000.	Kilograms
Miligrams	.0010	Grams
Mililiters	.0010	Liters
Millmeters	.1	Centimeters
Milimeters	.03937	Inches
Miligrams/Liter	1.	Parts/Million
Million Gals./Day	1.54723	Cubic Feet/Sec

CONVERSION FACTORS

Multiply	*By*	*To Obtain*
Miner's Inches	1.5	Cubic Ft./Min
Minutes (Angle)	.0002909	Radians
Ounces	16.	Drams
Ounces	437.5	Grams
Ounces	.0625	Pounds
Ounces	28.349527	Grams
Ounces	.9115	Ounces (Troy)
Ounces	.0000279	Tons (Long)
Ounces	.00002835	Tons (Metric)
Ounces, Troy	480.	Grams
Ounces, Troy	20.	Pennyweights (Troy)
Ounces, Troy	.08333	Pounds (Troy)
Ounces, Troy	31.103481	Grams
Ounces, Troy	1.09714	Ounces (Avoir)
Ounces (Fluid)	1.805	Cubic Inches
Ounces (Fluid)	.02957	Liters
Ounces/Sq.Inch	.0625	Lbs./Sq.In
Parts/Million	.0584	Grains/U.S. Gal
Parts/Million	.07016	Grains/Imperial Gal
Parts/Million	8.345	Lbs./Million Gal
Pennyweight (Troy)	24.	Grains
Pennyweight (Troy)	1.55517	Grams
Pennyweight (Troy)	.05	Pounds (Troy)
Pennyweight (Troy)	.0041667	Ounces (Troy)
Pounds	16.	Ounces
Pounds	256.	Drams
Pounds	7,000.	Grains
Pounds	.0005	Tons (Short)
Pounds	453.5924	Grams
Pounds	1.21528	Pounds (Troy)
Pounds	14.5833	Ounces (Troy)
Pounds (Troy)	5760.	Grains
Pounds (Troy)	240.	Pennyweights (Troy)
Pounds (Troy)	12.	Ounces (Troy)
Pounds (Troy)	373.241777	Grams
Pounds (Troy)	.822857	Pounds (Avoir)
Pounds (Troy)	13.1657	Ounces (Avoir)
Pounds (Troy)	.00036735	Tons (Long)
Pounds (Troy)	.00041143	Tons (Short)
Pounds (Troy)	.00037324	Tons (Metric)
Pounds of Water	.01602	Cubic Feet
Pounds of Water	27.68	Cubic Inches
Pounds of Water	.1198	Gallons
Pounds/Cubic Foot	.01602	Grams/Cubic Cm
Pounds/Cubic Foot	16.02	Kgs./Cubic Meter
Pounds/Cubic Foot	.0005787	Lbs./ Cubic Inch
Pounds/Cubic Foot	27.68	Grams/Cubic Cm
Pounds/Cubic Foot	27,680.	Kgs./Cubic Meter
Pounds/Cubic Foot	1,728.	Lbs./Cubic Foot

CONVERSION FACTORS

Multiply	*By*	*To Obtain*
Pounds of Water/Min	.000267	Cubic Ft./Sec
Pounds/Foot	1.488	Kgs./Meter
Pounds/Gallon	8.337	Grams/Cubic Cm.
Pounds/Inch	178.6	Grams/Cm.
Pounds/Sq.Foot	.01602	Feet of Water
Pounds/Sq.Foot	.0004883	Kgs./Sq.Cm.
Pounds/Sq.Foot	.006945	Pounds/Sq.Cm.
Pounds/Sq.Inch	.06804	Atmospheres
Pounds/Sq.Inch	2.307	Feet of Water
Pounds/Sq.Inch	2.036	Inches of Mercury
Pounds/Sq.Inch	.07031	Kgs./Sq.Cm.
Quarts (Dry)	67.20	Cubic Inches
Quarts (Liquid)	57.75	Cubic Inches
Quarts (Liquid)	.946	Liter
Quintal	.50802	CWT (Hundred Weight)
Quintal (Argentine)	101.28	Pounds
Quintal (Brazil)	129.54	Pounds
Quintal (Castile, Peru)	101.43	Pounds
Quintal (Chile)	101.41	Pounds
Quintal (Mexico)	101.47	Pounds
Quintal (Metric)	220.46	Pounds
Rod	16.5	Feet
Rod	25.0	Links
Square Centimeter	.1550	Square Inch
Square Foot	.0929	Square Meter
Square Foot	.1296	Square Vara (Texas)
Square Inch	6.452	Square Centimeters
Square Kilometer	.3861	Square Mile
Square Meter	10.76	Square Feet
Square Inch	2.590	Square Kilometers
Square Vara (Texas)	7.716	Square Feet
Square Mile	640.	Acre
Temp. (°C) + 237	1.	Abs. Temp. (°C)
Temp. (°C) + 17.78	1.8	Temp. (°F)
Temp. (°F) + 460	1.	Abs. Temp. (°F)
Temp. (°F) - 32	.5555	Temp. (°C)
Tons (Long)	1,016.	Kilograms
Tons (Long)	2,240.	Pounds
Tons (Long)	1.12000	Tons (Short)
Tons (Metric)	1,000.	Kilograms
Tons (Metric)	2,205.	Pounds

TITIAN

CAPACITIES AND DISPLACEMENTS

	OD (ins)	ID (ins)	WEIGHT (lbs/ft)	CAP (bbl/ft)	DISPL (bbl/ft)
OPEN HOLE	26.0			0.6567	
	20.0			0.3886	
	17.50			0.2975	
	12.25			0.1458	
	8.50			0.0702	
CASING	20	19.124	94.0	0.3553	
	13.375	12.615	54.5	0.1546	
	13.375	12.515	61.0	0.1522	
	13.375	12.415	68.0	0.1497	
	13.375	12.347	72.0	0.1481	
	9.625	9.001	32.3	0.0787	
	9.625	8.681	47.0	0.0732	
	7.0	6.004	35.0	0.0350	
DRILL COLLARS	8.0	3.000	147.00	0.0087	0.0535
	8.0	3.240		0.0102	0.0519
	8.0	2.843		0.00785	0.0543
	8.0	2.8125	151.00	0.00768	0.0545
	6.5	2.8125	92.80	0.0077	0.0334
	6.5	2.25	99.50	0.0049	0.0362
	6.0	2.875		0.0080	0.0269
	6.0	2.813		0.00768	0.0273
	6.0	2.250	82.60	0.00492	0.0301
	3.75	1.50	31.60	0.00218	0.01147
DRILL PIPES	5.0	4.276	19.50	0.0178	0.00648
	5.0	4.214	20.50	0.0172	0.00708
	4.5	3.826	16.60	0.01422	0.00545
	4.5	3.640	20.00	0.01287	0.00680
	3.5	2.0625	25.50	0.00200	0.00776
	3.5	2.602	15.50	0.00657	0.00532
HWDP	5.0	3.02	50.00	0.00886	0.01543
	4.5	2.77	42.00	0.00745	0.01222
	4.0	2.58	28.00	0.00647	0.00907
	3.5	2.08	26.00	0.00420	0.00770
TUBING	4.5	3.958	12.6	0.01522	0.00548
	3.5	2.992	10.2	0.00829	0.00370
	2.875	2.441	6.4	0.00579	0.00233

Volume of Cylinder

$\boxed{(D_1^2 - D_2^2) \times 0.000971 \times L}$ bbl

Triplex Pump. 100 % Eff

$\boxed{3 \times 0.000971 \times d^2 \times L}$ bbl/stk

d = liner size, ins

L = stroke, ft

Nozzle Velocity :

$$Vn = \frac{0.418.3 \text{ X GPM}}{Dj^2} \quad \text{ft/sec}$$

Vn = nozzle velocity
Dj = nozzle size (/32 ins)

Survey :

TVD = TVD1 + (C_1 *COS I)
TVD_1 = TVD last survey
C1 = Course Length
I = Inclination

Pressure Loss :

$$\triangle P = \frac{PV \times V \times L}{60000\,(dh - dp)^2} + \frac{YP \times L}{200\,(dh - dp)} \text{ psi}$$

L = section length, ft
YP = yield point (lb/100 ft^2)
(dh-dp) = hole diam - outside pipe diam, ins.
PV = plastic viscosity
V = annular velocity, laminar, (ft/min)

Effective Circulating Density (ECD) :

$$ECD = Wo + \frac{\triangle P}{0.0519 \times TVD} \quad \text{lb/gal}$$

Surface Horse Power :

$$HPs = \frac{P \times GPM}{1714} \quad \text{HP}$$

HPs = surface horse power
P = pump pressure, psi
GPM = glow rate, (gal/min)

Bit Pressure Los :

$$Pb = \frac{MW \times Vn^2}{1120}$$

MW = mud weight, (lb/gal)
Vn = nozzle velocity, (ft/sec)

Bit Hydraulics Horse Power :

$$HHP = \frac{Pb \times GPM}{1714} \quad \text{HP}$$

Pb = total bit loss, psi
HHP = 0.65 x HPs

TITIAN

Hydrostatic Pressure

$$\boxed{P = 0.0519 \times W \times TVD} \quad \text{psia}$$

$$\boxed{P = 0.0098 \times W \times TVD} \quad \text{Kpa}$$

Pressure Gradient

$$\boxed{P.G. = 0.0519 \times W} \quad \text{psi/ft}$$

Overburden Gradient

$$\boxed{S = 0.433 \times pb\ \text{average} \times TVD} \quad \text{psi}$$

$$OBG = \frac{\Sigma 0.433 \times pb\ \text{average} \times D}{\Sigma D}$$

Equivalent Mud Weight

$$EMW = \frac{P}{0.0519 \times TVD} + MW_1$$

Mud Weight To Balance A Kick

$$MW2 = MW1 + \frac{SIDP}{0.0519 \times TVD}$$

D-exponent

$$d = \frac{\text{Log}\ (R / 60\ N)}{\text{Log}\ (12W / 10^4\ B)}$$

$$dxc = d \times (NFBG / ECD)$$

$$d = \frac{\text{Log}\ (R / 18.29\ N)}{\text{Log}\ (W / 14.88\ B)} \times (N.fbg / EXD) \qquad \text{metric}$$

$$Po = Pn \times \frac{D \times Cn}{D \times Co} \quad \text{lb/gal}$$

Fluid Velocity

In drillpipe :

$$Vp = \frac{0.408 \times GPM}{D^2} \qquad \text{ft/sec}$$

In Annulus :

$$Vp = \frac{0.408 \times GPM}{(D_1^2 - D_2^2)} \qquad \text{ft/sec}$$

Horse Power / Square Inches :

$$HP/in^2 = \frac{1.2732 \times HHP}{D^2}$$

D = hole diameter, ins.

Hydraulics Impact Force :

$$HIF = \frac{MW \times GPM \times Vn}{1932}$$

MW = mud weight, lb/gal
GPM = flow rate, gal/min
Vn = nozzle velocity, ft/sec

Bulk Density :

$$\text{Bulk Density} = \frac{8.34}{16.68 - W_1} \quad \text{gr/cc}$$

Shale Factor :

$$\boxed{\text{Shale Factor} = \frac{100}{Mass} \times Vol \times N}$$

Mass = Sample mass, gram
Vol = volume,ml
N = normality of methylele blue solution

True Hole Diameter from Carbide :

$$D = \sqrt{\frac{(\text{Excess STK}) \times (POP)}{0.000971 \times L} + OH^2}$$

D = True hole diameter,in
POP = Pump Out Put, BBL / STK
L = Open Hole Length, ft
OH = Bit size, in

TITIAN

CONVERSION FACTORS

Length	*Factor*
Inches to Centimeters	2.54
Feet to Centimeters	30.48
Feet to Meters	0.3048
Yards to Meters	0.9144
Miles to Meters	1609.3
Miles to Kilometers	1.609

Area	*Factor*
Sq. Inches to Sq. Centimeter	6.452
Sq. Feet to Sq. Centimeter	929.03
Sq. Feet to Sq. Meters	0.0929
Sq. Yards to Sq. Meters	4046.86
Acres to Sq. Meters	4046.86
Acres to Hectares	0.40469
Acres to Sq. Kilometers	0.00405
Sq. Miles to Sq. Kilometers	2.58999

Capacity / Volume	*Factor*
Cu Inches to Cu Centimeter	16.387
UK Pints to Liters	0.5683
UK Gallons to Liters	4.546
US Gallons to Liters	3.785
Cu Feet to Liters	28317
Cu Yards to Cu Meters	0.76
Cu Feet to Cu Meters	0.0283

Weight / Mass	*Factor*
Ounces to Grams	28.3495
Pounds to Grams	453.592
Pounds to Kilograms	0.45359
Long Tons to Tons	1.01605
Long Tons to Kilograms	1.016.05
Hundred Weight to Kg	50.8
Short Tons to Tons	0.91
Short Tons to Kilograms	910

Velocity	*Factor*
Miles / Hour to Feet / Mi	88
Miles / Hour to Km / Hour	1.60934
Miles / UK Gallon to Km	0.35401
Miles / US Gallon to Km	0.42514

TITIAN

CONVERSION FACTORS

Length	*Factor*
Centimeters to Inches	0.3937
Centimeters to Feet	0.0328
Meters to Feet	3.2808
Meters to Yards	1.0936
Meters to Miles	0.00062
Kilometers to Miles	0.62137

Area	*Factor*
Sq. Centimeter to Sq. Inches	0.155
Sq. Centimeter to Sq. Feet	0.00108
Sq. Meter to Sq. Feet	10.7639
Sq. Meter to Sq. Yards	0.00025
Sq. Meter to Acres	2.47105
Hectares to Acres	247.105
Sq. Kilometers to Acres	0.3861
Sq. Kilometers to Sq. Miles	2.58999

Capacity / Volume	*Factor*
Cu Centimeter to Cu Inches	16.387
Liters to UK Pints	1.76
Liters to UK Gallons	0.21997
Liters to US Gallons	0.21977
Liters to Cu Feet	0.0353
Cu Meters to Cu Yards	1.30795
Cu Meters to Cu Feet	35.3147

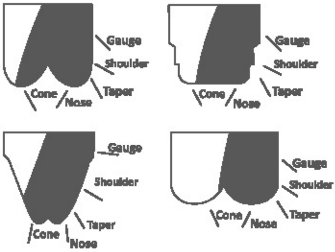
Weight / Mass	*Factor*
Grammies to Ounces	0.03527
Grammies to Pounds	0.0022
Kilograms to Pounds	2.2046
Tons to Long Tons	0.9842
Kilograms to Long Tons	0.00098
Kg to Hundred Weight	0.0197
Tons to Short Tons	1.0989
Kilograms to Short Tons	0.0011

Velocity	*Factor*
Feet / Minute to Miles	0.01136
Km / Hour to Miles / Hour	0.62137
Km / Liter to Miles / Gal	2.8248
Km / Liter to Miles / US	2.3522

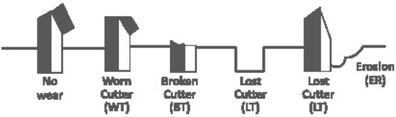
TITIAN

WEAR CHARACTERISTICS FOR FIXED CUTTER BITS

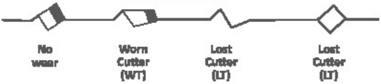
FIXED CUTTER WEAR LOCATION CODES



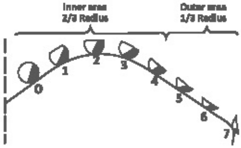
WEAR CHARACTERISTICS POST OR STUD CUTTERS



WEAR CHARACTERISTICS CYLINDER CUTTERS



SCHEMATIC OF CUTTER WEAR



TITIAN

CALCULATING FREEPOINT OF PIPE

Weight to pull above pipe and block weight to obtain 3 1/2 inches of stretch per 1.000 feet of pipe

TUBING

Nom Size Inches	Size O.D Inches	Wt./Ft. Pounds	Required Pull Pounds
1 1/4	1.660	2.40	6.600
1 2/2	1.900	2.90	6.500
2 1/16	2 1/16	3.40	7.500
2	2 3/8	4.70	10.000
2	2 3/8	5.30	12.000
2	2 3/8	5.95	13.000
2 1/2	2 7/8	6.50	14.000
2 1/2	2 7/8	7.90	17.000
2 1/2	2 7/8	8.70	19.000
3	3 1/2	9.30	20.000
3	3 1/2	10.30	23.000
3	3 1/2	12.95	28.000

CASING

5	5	15.00	33.000
5	5	18.00	40.250
5 1/2	5 1/2	17.00	38.000
5 1/2	5 1/2	23.00	50.000
6 5/8	6 5/8	24.00	53.000
6 5/8	6 5/8	32.00	70.000
7	7	29.00	64.500
7	7	35.00	77.000

Size O.D Inches	Wt./Ft. Pounds	Required Pull Pounds
2 3/8	4.85	10.000
2 3/8	6.65	14.000
2 7/8	6.65	14.000
2 7/8	10.40	22.000
3 1/2	9.50	20.000
3 1/2	13.30	27.000
3 1/2	15.50	33.000
4	11.85	23.000
4	14.00	29.000
4	15.70	33.000
4 1/2	13.75	27.500
4 1/2	16.60	33.000
4 1/2	20.00	42.000
4 1/2	22.82	48.000
5	16.25	33.000
5	19.50	40.250
5	25.60	54.000
5 1/2	19.20	38.000
5 1/2	21.90	44.500
5 1/2	24.70	50.500
6 5/8	25.20	50.000

BUOYANCY FACTORS*

Fresh Water	0.873
2% KCL	0.872
10 # Brine	0.847

* See next two pages for other buoyancy factors

EXAMPLE :

15.000' OF 2 3/8" - 5.95# per foot Tubing

Fluid = 8.42# per gallon 2% KCL

Block Weight = 10.000#

Pipe Weight in air = 15.000 x 5.95# = 89.250#

Pipe Weight in Fluid = 89.250# x 0.872 = 77.826 #

Pipe Weight including block = 77.826 + 10.000# = 87.826 say 87.800

Taken from chart : pull needed over weight of pipe and block = 13.000#

Therefore, full of pipe to 87.800# total. Mark Pipe at top of rotary table. Measure between two marks

Assuming the pipe measure 24" beetwen the two marks, then the Pipe is stuck at :

$$\frac{24''}{24''} = 6{,}857 \times 1000' = 6.857' \text{ of free Side}$$

TITIAN

At Rig Site Only Tighten After Jarring

Top Sub & Housings (Upper, Middle, Lower + Spline)	10 + 9 9 + 8 8 + 7 7 + 6	Minimum ft - lbs	4 500	6 500	16 000	21 000	32 000	32 000	40 000
		Maximum ft - lbs	5 500	8 000	20 000	26 000	40 000	40 000	50 000
Packing Nut On Spline Housing	6 + 5	FT-LBS	4 000	8 000	10 000	12 000	14 000	14 000	20 000
Jack Nut On Spline Mandrel	3 + 2	FT-LBS	5 000	8 000	20 000	26 000	40 000	40 000	50 000

For Workshop Technical Only :

Trip Mandrel Coupling/Spine Mandrel ft - lbs		1 000	1 500	2 000	3 000	4 000	4 000	10 000
Trip Mandrel On Trip Mandrel ext	Minimum ft - lbs	400	500	600	600	600	600	800
	Maximum ft - lbs	600	700	800	800	800	800	1 000

TITIAN

IADC DULL GRADING FORMAT

Cutting Structure				B	G	Remarks	
Inner Rows	Cutter Rows	Dhull Char	Location	Brng/ Seals	Guge 1/16"	Other Char	Reason Pulled

Cutter wear

0 - No wear
•
•
8 - No Usable Cutting Structure

Dull Characteristic

- *BC - Broken Cone
- BF - Bond Failure
- BT - Broken Teeth/Cutters
- U - Balled Up
- *CC - Cracked Cone
- *CD - Cone Dragged
- *CI - Cone Interference
- CR - Cored
- CT - Chipped Cutters
- ER - Erison
- *FC - Flat Crested Wear
- HC - Heat Checking
- JD - Junk Damage
- *LC - Lost Cone
- LN - Lost Nozzle
- LT - Lost Cutters
- NR - Not Rerunable
- OC - Off-Center Wear
- PB - Pinched Bit
- PN - Plugged Nozzle/Flow passage
- RG - Rounded Gauge
- RO - Ring Out
- RR - Rerunable
- *SD - Shirttail Damage
- *SS - Self Sharpening wear
- *TR - Tracking
- WO - Washed Out - bit
- WT - Worn Teeth/Cutters
- NO - No Major/Other Dull Characteristics

* Roller Cone Bit Codes

Wear Location

C - Cone
N - Nose (Row)
T - Taper
S - Shoulder
G - Gauge
A - All Areas/Row
H - Heel Row

Bearing wear

Non Sealed Bearings

D - No Life Used
•
•
8 - All Life Used
Sealed Bearings

Sealed Bearings

E - Sealed Effective
F - Sealed Failed

X - Fixed Cutter Bits

Gauge Wear

1 - In Gauge
1/16" - 1/16" Under Gauge
2/16" - 1/8" Under Gauge
•
•

Reason Pulled

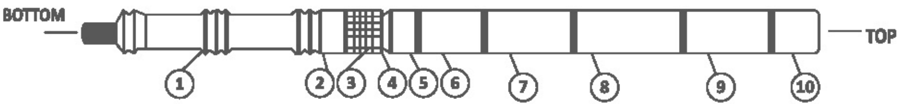
- BHA - Change Bottom-hole Assembly
- DMF - Downhole Motor Failure
- DSF - Drill String Failure
- DST - Drill Stem Test
- DTF - Downhole Tool Failure
- LOG - Run Logs
- RIG - Rig Repair
- CM - Condition Mud
- CP - Core Point
- DP - Drill Plug
- FM - Formation Change
- HP - Hole Problem
- HR - Hours
- PP - Pump Pressure
- PR - Penetration Rate
- TD - Total Depth/CSG.Depth
- TQ - Torque
- TW - Twist-off
- WC - Weather Conditions
- WO - Washout-Drill String

* Roller Cone Bit Codes

Note : See Reverse side for Illustration of wear characteristics for fixed cutter bits
Reference : SPE / IADC Paper No. 23939

This joint not tight when arriving at location
Caution : Do Not Over Tighten (see over)

These joint are tightened prior to being sent to location
do not tighten unless after extensive jarring (see over)



1 Flex joint or double pin sub
2 Spline mandrel
3 Jack nut
4 Spline mandrel
5 Packing nut
6 Spline housing
7 Lower Control Housing
8 Middle Housing
9 Upper Control Housing
10 Top Sub

Surface Tripping of Earthquaker (For Use With Jack Nut Type EQ Jar)

4 1/8"
TO = 9"
4 3/4"
6"
THRU = 7"
8"

Jar in cocked position as delivered on location
fig.1

Screwing up and applying torque on jack nut until jar trips (rig tongs on) 3+2

After bump is observed jar is extended by picking up
fig.3

4 1/8"
TO = 17"
4 3/4"
6"
THRU = 13.5"
8"
FIG.4

Jar ready to be run in hole after jack nut is tightened against spline mandrel shoulder (caution do not over tighten)

Subject:

Date:

Sun	Mon	Tue	Wed	Thu	Fri	Sat

Pg:

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Subject:

Date:

Sun	Mon	Tue	Wed	Thu	Fri	Sat

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