

5

MAY

Friday

Tables from 1 to 99. 2017

1) 27.

We might not know the table of 27 by heart.

So we divide 27 into two parts.

27.

6

Now, we will write the table for 2 and 7 side by side.

Saturday

2	7	ANS
$2 \times 1 = 2$	$7 \times 1 = 7$	27
$2 \times 2 = 4$	$7 \times 2 = 14$	54
$2 \times 3 = 6$	$7 \times 3 = 21$	81
$2 \times 4 = 8$	$7 \times 4 = 28$	108
$2 \times 5 = 10$	$7 \times 5 = 35$	135
$2 \times 6 = 12$	$7 \times 6 = 42$	162
$2 \times 7 = 14$	$7 \times 7 = 49$	189
$2 \times 8 = 16$	$7 \times 8 = 56$	216
$2 \times 9 = 18$	$7 \times 9 = 63$	243
$2 \times 10 = 20$	$7 \times 10 = 70$	270

APR  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
16	17	18	19	20	21	22	23	24	25	26	27	28	29

MAY

7

Sunday

2017

So, we got the answer by using carry-forward method.

Tables from 100 to 999.

1) 467.

Answer.

4	6	7	467
8	12	14	934
12	18	21	1401
16	24	28	1868
20	30	35	2335
24	36	42	2802
28	42	49	3269
32	48	56	3736
36	54	63	4203
40	60	70	4670

8

Monday

So we will get the answer by using the carry-forward method.

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7	8	9	10	11	12	13	14

JUN  
2017

9

MAY

Tuesday

## MULTIPLICATION OF Numbers

1) Numbers close to 100.

a) 
$$\begin{array}{r} 101 \\ \times 111 \\ \hline \end{array} \quad \begin{array}{l} (+1) \\ \cancel{\times} \\ (+11) \end{array}$$

$$(101+11) \times 100 \\ + (11 \times 1)$$

$$\Rightarrow \begin{array}{r} 11200 \\ + 11 \\ \hline 11211 \end{array}$$

10

Wednesday

Study: 1) 101 is 1 more than 100. So,  $(+1)$   
 2) 111 is 11 more than 100. So  $(+11)$

2) ~~Keep multiplying among the digits.~~

2) Add  $(101+11)$  OR  
 Add  $(111+1)$ .

3) Since we are using 100 as the base, multiply it with 100.

APR  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	-	-	-	-	1	2	3	4	5	6	7
16	17	18	19	20	21	22	23	24	25	26	27	28	29

11

MAY

Thursday

2017  
b) Finally add.  
 $(11 \times 1)$  to the answer

b) 
$$\begin{array}{r} 94 \\ \times 98 \\ \hline \end{array} \quad \begin{array}{l} (-6) \\ \cancel{\times} \\ (-2) \end{array}$$

$$(94-2) \times 100 \\ + (-6) \times (-2)$$

$$= \begin{array}{r} 9200 \\ + 12 \\ \hline 9212 \end{array}$$

12

Friday

2) Numbers close to 200

a) 
$$\begin{array}{r} 202 \\ \times 205 \\ \hline \end{array} \quad \begin{array}{l} (+2) \\ (+5) \end{array}$$

$$(202+5) \times 200 \\ + (+2) \times (+5)$$

$$= \begin{array}{r} 81400 \\ + 10 \\ \hline 81410 \end{array}$$

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	-	-	-	-	1	2	3	4	5	6	7
18	19	20	21	22	23	24	25	26	27	28	29	30	-

JUN  
2017

13 MAY

Saturday

3) Number close to 300

$$a) \begin{array}{r} 303 \\ \times 306 \\ \hline \end{array} \quad \begin{array}{r} ( +3 ) \\ ( +6 ) \end{array}$$

$$+ (3 \times 6)$$

$$= 309 \times 306$$

$$+ 18$$

14

$$\begin{array}{r} = 92700 \\ + \frac{18}{92718} \end{array}$$

Sunday

4) Number close to 50

$$a) \begin{array}{r} 52 \\ \times 56 \\ \hline \end{array} \quad \begin{array}{r} ( +2 ) \\ ( +6 ) \end{array}$$

$$+ (52+6) \div 2 \times 100$$

$$+ (2 \times 6) = 2900 \Rightarrow \underline{\underline{2912}}$$

MAY 15

Monday

2017 5) Multiplication of  
2 - digit number

$$a) \begin{array}{r} (53 \times 67) \\ = \frac{53}{67} \end{array}$$

$$(5 \times 4) \quad (5 \times 7 + 4 \times 3) \quad (7 \times 3)$$

$$= 20 \quad 47 \quad 21$$

16

Tuesday

Steps: 1) Multiplication of elements in column 2.

2) Cross multiplication of elements

3) Multiplication of elements in column 1.

For Eg:

Column 1	5	3	Column 2
	4	7	

Row 1                          Row 2

APR	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
2017	16	17	18	19	20	21	22	23	24	25	26	27	28	29

JUN	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
2017	16	19	20	21	22	23	24	25	26	27	28	29	30	-

17 MAY

Wednesday

$$3) \begin{array}{r} 46 \\ \times 26 \\ \hline \end{array}$$

$$(4 \times 2)(4 \times 6 + 6 \times 6) \\ 2 \times 6$$

$$8 \longdiv{36} \quad 36$$

$$\Rightarrow 1196$$

6) Multiplication of  
3-digit number

$$18 \quad a) \begin{array}{r} 112 \\ \times 223 \\ \hline \end{array}$$

$$(1 \times 2)(1 \times 2 \quad \begin{array}{r} 1 \times 3 \\ + 1 \times 3 \\ 2 \times 2 \\ + 2 \times 2 \end{array}) \quad (2 \times 3)$$

$$2 \longdiv{4191} \quad 716 \\ = \underline{\underline{24976}}$$

2017

2017 step 1) Multiplication of  
elements in Column 3.

2) Cross multiplication of  
elements in Column 2 &

Column 3

3) Cross multiplication of  
elements in Column 1 &  
Column 3. Then multiplication  
of elements in Column 2.

4) Cross multiplication of  
elements in Column 1 and  
Column 2.

5) Multiplication of Saturday  
elements in Column 1.

20

6) If required, use the  
Carry - forward technique  
Column Column Column

Row 1

1	1	2
2	2	3

Row 2

Friday

MAY 19

APR

2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
16	17	18	19	20	21	22	23	24	25	26	27	28	29

JUN

2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
18	19	20	21	22	23	24	25	26	27	28	29	30	-

21 MAY

Sunday

7) Multiplication of  
a - digit number.

$$\begin{array}{r} 8639 \\ \times 675 \\ \hline \end{array}$$

$$\begin{array}{r} 8639 \\ \times 675 \\ \hline \end{array}$$

$$\begin{array}{r} 8639 \\ \times 675 \\ \hline \end{array}$$

Monday

22

$$\begin{array}{r} (8 \times 0) (8 \times 6) (8 \times 7) (5 \times 8) (6 \times 9) (3 \times 5) (9 \times 5) \\ + 0 \times 3 0 \times 9 6 \times 9 9 \times 7 \\ 6 \times 0 6 \times 4 6 \times 7 3 \times 7 \\ 3 \times 6 \end{array}$$

$$\Rightarrow 10 | 48 | 92 | 100 | 105 | 78 | 45 .$$

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
16	17	18	19	20	21	22	23	24	25	26	27	28	29
30	-	-	-	-	-	-	-	-	-	-	-	-	-

2017

2017 Step: 1) Multiplication of column.

elements in row or column.

2) Multiplication of elements in column 3 & Column 4 Cross

multiply multiplication of

3) Cross multiplication of column 2 & Column 3 elements in column 3.

4) Multiply elements in

cross multiplication of

n) Cross multiplication of column 1 & Column 2 & Column 3:

Wednesday

24

5) Cross multiplying elements in

Column 1 & Column 3 & Then

multiplying elements in column 2

6) Cross multiplying elements in

Column 1 & Column 2

7) Multiplication elements in column 1 & Column 3

$$\begin{array}{|c|c|c|c|} \hline \text{Row 1} & 8 & 6 & 3 & 9 \\ \hline \text{Row 2} & 0 & 6 & 7 & 5 \\ \hline \end{array}$$

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7	8	9	10	11	12	13	14
15	-	-	-	-	-	-	-	-	-	-	-	-	-

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
18	19	20	21	22	23	24	25	26	27	28	29	30	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-

MAY 23

Tuesday

Sunday

1) The cross multiplication of numbers.

$$\begin{array}{r} 807 \\ \times 9 \\ \hline 908 \end{array}$$

$$9+8$$

$$\begin{array}{r} 72 \\ \times 7 \\ \hline 7+8 \end{array}$$

26

Friday

True  
use 2-digits sum you

~~8~~,  
~~1~~  
102

127

56

8x9

8x8

- Stch :
- 1) Column three multiplication
  - 2) Cross multiplication
  - 3) Column 19 (Column 3) Column 1 multiplication

2017

Saturday

MAY 27

1) Multiplication of numbers with two zeros in them or remainder.

$$\begin{array}{r} 9008 \\ \times 6006 \\ \hline (9+6). \quad 8+6 \end{array}$$

$$54 \quad | \quad 102 \quad | \quad 48$$

True, make sure, you  
use three digits.

28

Sunday

54 102 048

Stch 1) Column 3 multiplication

2) Cross multiply the

elements of (column)

and column 4

3) Column 1 multiplication

APR	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
2011	16	17	18	19	20	21	22	23	24	25	26	27	28	29

SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
18	19	20	21	22	23	24	25	26	27	28	29	30	-

SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
18	19	20	21	22	23	24	25	26	27	28	29	30	-

JUN 2017

29 MAY

Monday

Multiplication of number with  
three zeros in them in the  
middle.

30

Kra, meh Kra, you  
unfindig fit

S9-600141.0063

Step 1) Column 6 multiplication  
2) Column 2 & Column 6  
cross multiplication  
3) Column 1,2 multiplication

stry: 1) link T29 vertically  
827 horizontally

60288

5/8/21/17/18/3

2) Since there are 3 digits in one number if it's a  $(3 \times 3)$  table.

State: 1) Work 729 Vertically,  
827 Horizontally

Sudoku

9				2	1	7	5	6
7	2	1	6	3	8	4	9	7
8	3	6	5	7	2	9	1	4
5	6	4	7	8	9	3	2	1
2	7	9	1	4	5	6	8	3
1	4	8	3	6	7	2	9	5
6	3	2	5	9	1	4	7	8
9	5	7	8	3	6	2	4	1
7	8	4	2	5	9	1	3	6

It is a  $(3 \times 3)$  tally.

Multiplikation by diagram

Wednesday

MAY  
**31**

1

JUNE

Thursday

2017

- 2) In the multiplication of 1<sup>st</sup> column with 1<sup>st</sup> row  
For eg,  $7 \times 8 = 56$ .  
Write 5 in the upper slot  
96 in the lower slot.
- 3) Similarly for the remaining numbers
- 4) Finally, add the numbers diagonally.

2

Friday

- 5) Use the carry forward technique.
- 6) That's it

MAY  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	1	2	3	4	5	6	7	8	9	10	11	12	13
21	22	23	24	25	26	27	28	29	30	31	-	-	-

3

JUNE

Saturday

2017

## Multiplication of Decimals

$$1) 2.1 \times 3.2$$

forget about the decimal.

$$(2 \times 3) / (2 \times 1) \\ \begin{array}{r} 21 \\ \times 32 \\ \hline 22 \\ + 6 \\ \hline 672 \end{array}$$

$$\begin{array}{r} 6 | 7 | 2 \\ = 672. \end{array}$$

4

Sunday

Now, put the decimal point at 2 places from the right because in 2.1, there is one decimal pt & in 3.2, also there is one decimal point - so, total there are 2 decimal points

$$\therefore \text{Answer is : } \underline{\underline{6.72}}$$

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	-	-	-	-	1	2	3	4	5	6	7
16	17	18	19	20	21	22	23	24	25	26	27	28	29

JUL  
2017

5

JUNE

Monday

$$2) 8.5 \times 4.1$$

Forget about the decimal point

85

41

$$(8 \times 4) \quad (1 \times 8) \quad (1 \times 5)$$

$$\begin{array}{r} + \\ 4 \times 5 \\ \hline 32 \end{array}$$

$$28 \quad | \quad 5$$

6

Tuesday

~~3485~~

$$= \underline{\underline{3485}}$$

2017

2017

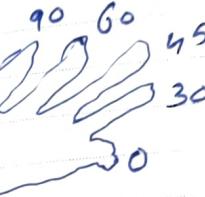
11

JUNE

Sunday

## TRIGONOMETRY

Left hand.



$$\sin \theta = \frac{\text{Fingers below}}{2}$$

$$\cos \theta = \frac{\text{Fingers above}}{2}$$

$$\tan \theta = \frac{\text{Fingers below}}{\text{Fingers above}}$$

12

Monday

: you can use these formulas to find out the different values.

MAY  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	1	2	3	4	5	6	7	8	9	10	11	12	13
21	22	23	24	25	26	27	28	29	30	31	-	-	-

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JUL  
2017

13

JUNE

Tuesday

Alternative method.

$$\begin{array}{cccccc} & 0 & 30 & 45 & 60 & 90 \\ \sin \theta & \sqrt{\frac{0}{4}} = 0 & \sqrt{\frac{1}{4}} = \frac{1}{2} & \sqrt{\frac{2}{4}} = \frac{1}{\sqrt{2}} & \sqrt{\frac{3}{4}} = \frac{\sqrt{3}}{2} & \sqrt{\frac{4}{4}} = 1 \end{array}$$

$$\begin{array}{cccccc} & 0 & 30 & 45 & 60 & 90 \\ \cos \theta & 1 & \sqrt{3}/2 & 1/\sqrt{2} & \sqrt{3}/2 & 0 \end{array}$$

$$\begin{array}{cccccc} & 0 & 30 & 45 & 60 & 90 \\ \tan \theta & = \sin \theta / \cos \theta & 0 & 1/\sqrt{3} & 1 & \sqrt{3} \\ & & & & & \text{Not defined} \end{array}$$

14

Wednesday

$$\begin{array}{cccccc} & 0 & 30 & 45 & 60 & 90 \\ \cot \theta & = 1/\tan \theta & \text{Not defined} & 2 & \sqrt{2} & \sqrt{3}/3 \end{array}$$

$$\begin{array}{cccccc} & 0 & 30 & 45 & 60 & 90 \\ \sec \theta & = 1/\cos \theta & 1 & 2/\sqrt{3} & \sqrt{2} & 2 \end{array}$$

$$\begin{array}{cccccc} & 0 & 30 & 45 & 60 & 90 \\ \csc \theta & = 1/\sin \theta & \text{Not defined} & \sqrt{3} & 1 & \sqrt{3} \end{array}$$

MAY  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	1	2	3	4	5	6	7	8	9	10	11	12	13
21	22	23	24	25	26	27	28	29	30	31	-	-	-

JUNE

15

Thursday

2017

How to draw this table :

- 1) In the row of  $\sin \theta$ , write  $0, 1, 2, 3, 4$ .  
 - Divide by 4  
 - Take the square root  
 - Now you will get the values for  $\sin \theta$ .

- 2) In the row of  $\cos \theta$ , write in the reverse order.

- 3) Then, as per the formulae, find out the values for  $\tan \theta$ ,  $\cot \theta$ ,  $\sec \theta$  and  $\csc \theta$ .

- 4) Remember, when the denominator is zero, then that value is Not Defined.

16

Friday

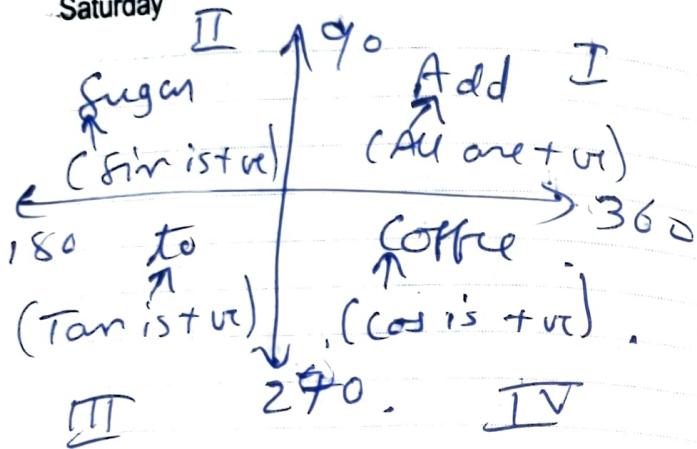
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	1	2	3	4	5	6	7	8	9	10	11	12	13
16	17	18	19	20	21	22	23	24	25	26	27	28	29

JUL  
2017

17

JUNE

Saturday



2017

2017

18

On the I<sup>st</sup> quadrant,  
All are positive.

Sunday

On the II quadrant,  
only fir is +ve.On the III quadrant,  
only Taro is +veOn the IV quadrant,  
only Coconut is +ve.MAY  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	1	2	3	4	5	6	7	8	9	10	11	12	13
21	22	23	24	25	26	27	28	29	30	31	-	-	-

JUNE

19

Wednesday Monday

RULE 1: Add Sugar to  
Cotter

(fir / - or figs.)

RULE 2: 180/360 - Horizontal  
line.(So no change in fir,  
Coconut, taro, - -)90/270 - Vertical line. 20  
(So, now will be a change  
in fir, Coconut, taro, - -)

Tuesday

/

fir  $\rightarrow$  CoCofigs  $\rightarrow$  CoCotaro  $\rightarrow$  CoCo

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	-	-	-	-	1	2	3	4	5	6	7
16	17	18	19	20	21	22	23	24	25	26	27	28	29

JUL  
2017

21 JUNE

Wednesday

2017

Example :

$$1) \sin 120^\circ$$

~~It lies in II Quadrant~~  
~~so sin 120 → +ve.~~  
~~cos 120 → -ve.~~

Also,

22

Thursday

$$\sin(180 - 60)$$

It lies in Quadrant II.

- As per Rule 1, value is  $+\sqrt{3}$ .
- As per Rule 2, No change from sin to cos because there is  $180^\circ$  used in the equation.

$$\text{So, answer is : } \sin 60 = +\frac{\sqrt{3}}{2}.$$

MAY  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	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 23  
Friday

2017

$$2) \tan 330^\circ$$

$$= \tan(360 - 30)$$

It lies in IV Quadrant-

As per Rule 1, value is  $-\sqrt{3}$ .

As per Rule 2, No change for

tan  $\alpha$  to  $\tan \alpha$

- you have to discard  $360^\circ$ .

$$= \tan(-30)$$

$$= -\tan \alpha$$

$$= -\frac{1}{\sqrt{3}}$$

$$3) \cos 750^\circ$$

$$= \cos(750/360)$$

24

Saturday

$$= \cos(360 \times 2 + 30)^\circ$$

$$= \cos 30^\circ \sqrt{\frac{750}{720}}$$

It lies in I Quadrant.

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	-	-	-	-	-

JUL  
2017

25 JUNE

Sunday

2017

As per Rule 1, value is +ve

As per Rule 2, No change from cos to sin.

So, Answer is:  $\cos 30^\circ = +\frac{\sqrt{3}}{2}$ .

For calculation purpose,  
26 you have to discard  
Monday  $(360 \times 2)$

52

26

Monday

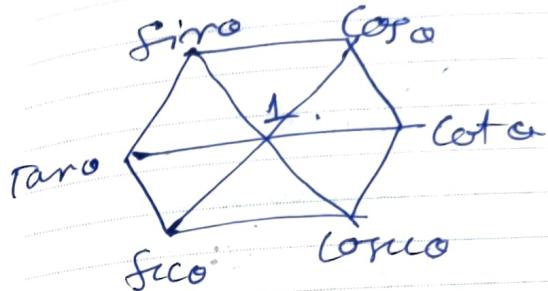
52

JUNE 27

Tuesday

2017

Hexagonal Method of trigonometry



Now, look at the diagonals.

28

Wednesday

$$1) \sin \alpha = 1 / \text{csc} \alpha \\ \text{csc} \alpha = 1 / \sin \alpha .$$

$$2) \cos \alpha = 1 / \sec \alpha \\ \sec \alpha = 1 / \cos \alpha .$$

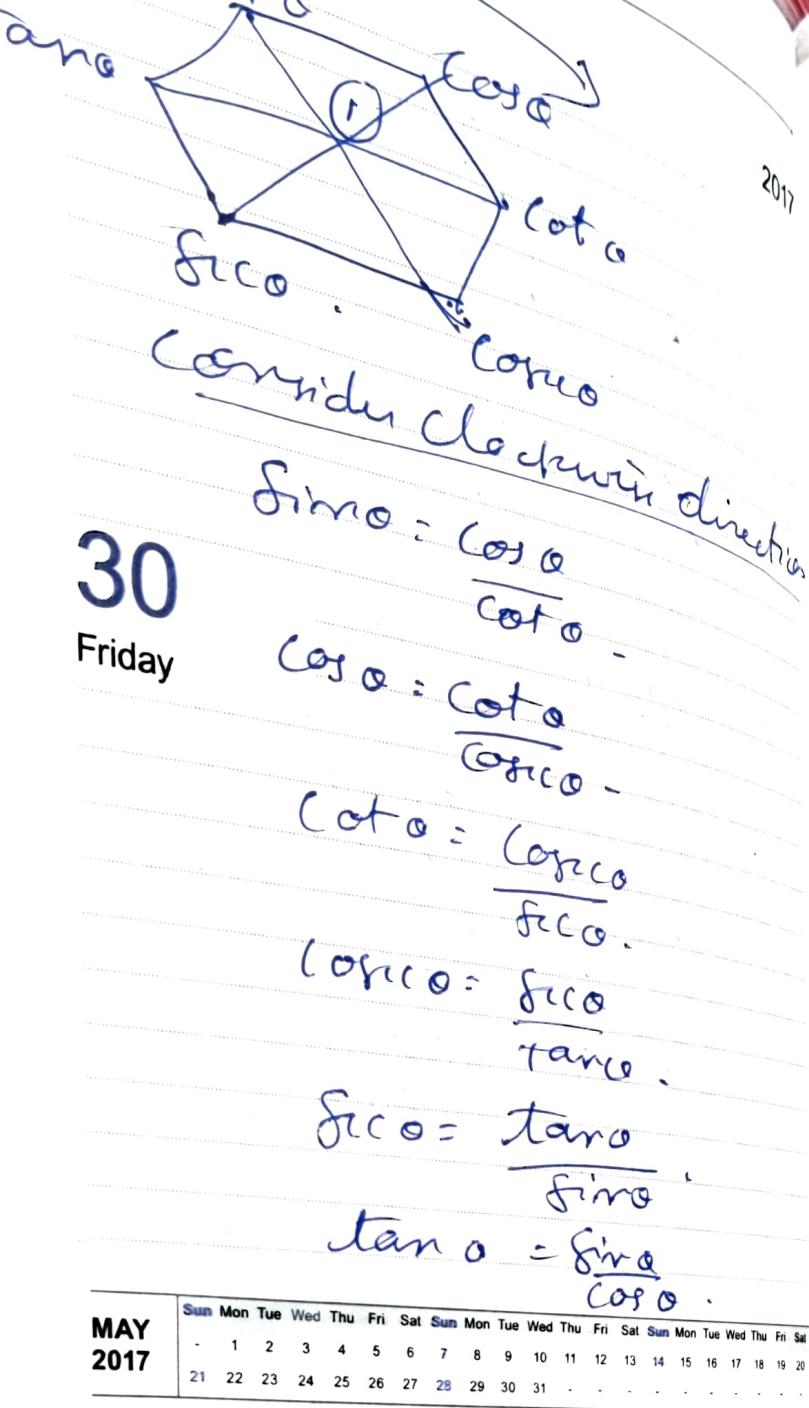
$$3) \tan \alpha = 1 / \cot \alpha \\ \cot \alpha = 1 / \tan \alpha .$$

MAY  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	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	-	-	-	-	-	-	-	-	-	-

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
-	-	-	-	-	-	-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
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JUL  
2017



30

Friday

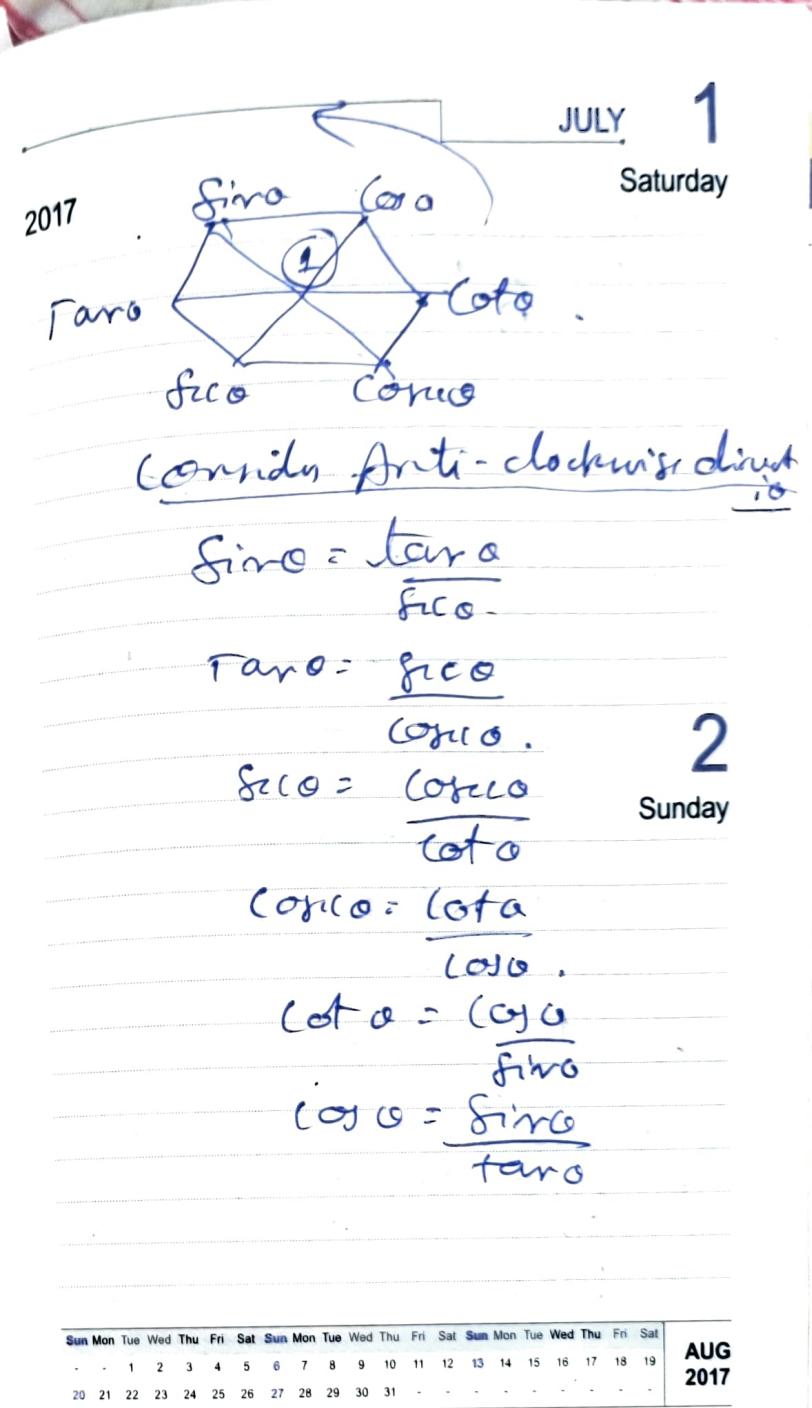
$$\cos \alpha = \frac{\text{Coto}}{\text{Corico}}$$

$$\text{Corico} = \frac{\text{Taro}}{\text{Sino}}$$

$$\text{Tano} = \frac{\text{Sino}}{\text{Taro}}$$

$$\text{Sico} = \frac{\text{Taro}}{\text{Firo}}$$

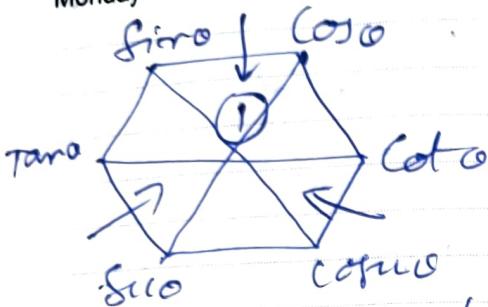
$$\text{Firo} = \frac{\text{Coto}}{\text{Corico}}$$



3

JULY

Monday



2017

JULY

5

Wednesday

2017

$$3) \sin \theta = \cos(90^\circ - \theta)$$

$$\cos \theta = \sin(90^\circ - \theta)$$

FINDING THE LARGEST FRACTION

$$1) \frac{1}{6}, \frac{3}{8}, \frac{2}{7}, \frac{5}{11}$$

a) compare the 1<sup>st</sup> two fractions

$$\frac{1}{6}, \frac{3}{8}$$

Cross multiplying,

$$1 \times 8 = 8$$

$$3 \times 6 = 18$$

Because of numerator 3,

$$\frac{3}{8} > \frac{1}{6}$$

b) compare the 2<sup>nd</sup> & 3<sup>rd</sup> fraction

$$\frac{3}{8}, \frac{2}{7}$$

$$3 \times 7 = 21$$

$$8 \times 2 = 16$$

$$\frac{3}{8} > \frac{2}{7}$$

4

$$\sin^2 \theta + \cos^2 \theta = 1.$$

Tuesday

$$\tan^2 \theta + \cancel{1} = \sec^2 \theta.$$

$$1 + \cot^2 \theta = \operatorname{cosec}^2 \theta.$$



$$\sin \theta \rightarrow \cos \theta$$

$$1) \sin \theta = \cos(90^\circ - \theta)$$

$$\cos \theta = \sin(90^\circ - \theta)$$

$$2) \tan \theta = \cot(90^\circ - \theta)$$

$$\cot \theta = \tan(90^\circ - \theta)$$

JUN  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	-	-	-	-	1	2	3	4	5	6	7
18	19	20	21	22	23	24	25	26	27	28	29	30	-

6

Thursday

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	-	-	-	-	1	2	3	4	5	6	7
20	21	22	23	24	25	26	27	28	29	30	31	-	-

AUG  
2017

7

JULY

Friday

Consider  $\frac{3}{8}, \frac{5}{11}$ 

2017

$$3 \times 11 = 33$$

$$\underline{5 \times 8} = 40$$

Because of 5, fraction  $\frac{5}{11} > \frac{3}{8}$ .

Now, the largest fraction is  $\frac{5}{11}$ .

8

2)  $\frac{2}{3}, \frac{3}{5}, \frac{7}{9}, \frac{5}{7}$ .

Saturday

Consider the first 2 fractions

$$\frac{2}{3}, \frac{3}{5}$$

$$2 \times 5 = 10$$

$$\underline{3 \times 3} = 9.$$

Because of numerator 2,

$$\frac{2}{3} > \frac{3}{5}.$$

JUN  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	1	2	3	4	5	6	7	8	9	10	11
18	19	20	21	22	23	24	25	26	27	28	29	30	-

JULY

9

Sunday

2017

Now, Consider  $\frac{2}{3}, \frac{7}{9}$ .

$$2 \times 9 = 18$$

$$\underline{3 \times 7} = 21$$

Because of numerator 7,

$$\frac{7}{9} > \frac{2}{3}.$$

Now,

Consider  $\frac{7}{9}, \frac{5}{7}$ 

10

Monday

$$7 \times 7 = 49.$$

$$\underline{9 \times 5} = 45$$

Because of numerator 7,

$$\frac{7}{9} > \frac{5}{7}.$$

So, the largest fraction is  $\frac{7}{9}$ .

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	1	2	3	4	5	6	7	8	9	10	11
20	21	22	23	24	25	26	27	28	29	30	31	-	-

AUG  
2017

11 JULY

Tuesday

Lcm

It is always greater than or equal to the given number.

1) 5, 10, 25, 50.

- Pick up the highest number  
 $\underline{50}$ .

12

Wednesday - Now check whether the remaining numbers are the multiples of 50.  
 - 5, 10, 25 are the multiples of 50.

So, LCM = the largest no  
 $= \underline{\underline{50}}$

2017

JULY 13

Thursday

2017

2) 3, 9, 12, 18.

- My highest no. is 18.
- whether all the remaining nos. are multiples of 18.
- No. 12 is not the multiple of 18.
- So, now, the next multiple of 18 is  $18 \times 2 = 36$ .
- Now, see whether 12 is the multiple of 36 or not.

14

Friday

- Yet.  
 - So, LCM = 36

JUN  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	1	2	3	4	5	6	7	8	9	10	11
18	19	20	21	22	23	24	25	26	27	28	29	30	-

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	1	2	3	4	5	6	7	8	9	10	11	12
20	21	22	23	24	25	26	27	28	29	30	31	-	-

AUG  
2017

**15 JULY**

Saturday

3) 8, 11, 16.

2017

- Highest no = 16.
- Check whether the remaining nos are multiples of 16 or not.
- No. 11 is a prime no & not the multiple of 16.

$$16 \\ \text{So, LCM} = 16 \times 11 \\ = 176$$

**16**

Sunday

2017

**17 JULY**

Monday

**HCF**

It is always less than or equal to the given number

$$1) 8, 12 \\ \text{Difference} = 12 - 8 \\ = 4.$$

Both 8 and 12 are divisible by 4.

$$\text{So, HCF} = 4.$$

$$2) 21, 35$$

$$\text{Difference} = 35 - 21 \\ = 14.$$

**18 JULY**

Tuesday

$$= 2 \times 7.$$

2 does not divide 21 & 35.  
So, we discard 2.

7 divides both 21 & 35

$$\text{So, HCF} = 7$$

**JUN 2017**

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
.	.	.	1	2	3	4	5	6	7	8	9	10	17
18	19	20	21	22	23	24	25	26	27	28	29	30	.

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
.	1	2	3	4	5	6	7	8	9	10	11	12	13
20	21	22	23	24	25	26	27	28	29	30	31	.	.

**AUG 2017**

19 JULY

Wednesday

$$3) 27, 32$$

$$\text{Difference} = 32 - 27 \\ = 5.$$

5 doesn't divide 27 and 32  
So, we discard 5.  
And HCF = 1.

$$4) 35, 45, 50. \rightarrow A$$

20

Thursday

3 numbers  
we find the difference  
between.

192, 293, 391.

80, Difference:

$$35 - 49, 45 - 50, 35 - 50$$

$$\Rightarrow 10, 5, 15$$

(we ignore the minus sign)

now,

Least difference = 5.

5 divides all the nos.

$$\text{HCF} = 5 //$$

JUN  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	-	1	2	3	4	5	6	7	8	9	10
18	19	20	21	22	23	24	25	26	27	28	29	30	-

2017

JULY

21

Friday

2017

$$5) 150, 210, 300 \rightarrow A$$

Difference = 60, 90, 150.  
Least difference = 60.

$60 = 2 \times 3 \times 2 \times 5$   $\rightarrow T$ .  
2 divides all the nos in A.

$$50, \frac{150}{2}, \frac{210}{2}, \frac{300}{2}$$

$$75, 105, 150 \rightarrow B 22$$

Now, 5 divides all  
the nos in B

$$\frac{75}{5}, \frac{105}{5}, \frac{150}{5}$$

$$15, 21, 30 \rightarrow C$$

Now 3 divides all the  
numbers in C.

$$\frac{15}{3}, \frac{21}{3}, \frac{30}{3}$$

$$5, 7, 10 \rightarrow D$$

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	-	1	2	3	4	5	6	7	8	9	10
20	21	22	23	24	25	26	27	28	29	30	31	-	-

AUG  
2017

**24**  
Monday

The 1<sup>st</sup> 2 down it  
number is 0. 2017  
So, HCF from I is  
$$\begin{array}{r} 2 \times 3 \times 5 \\ = 30 \\ \hline \end{array}$$

**JUN  
2017**

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	1	2	3	4	5	6	7	8	9	10	11
18	19	20	21	22	23	24	25	26	27	28	29	30	-

**JULY 25**  
Tuesday

2017

## Percentage Trick

1) 73% of 92

$$\begin{array}{r} 73 \\ 92 \\ \hline (7 \times 9) \quad (2 \times 7) \quad (2 \times 3) \\ + \\ 9 \times 3 \\ \hline 63 \quad | \quad 41 \quad | \quad 6 \\ = \quad 67.16 \end{array}$$

**26**

Since it is a % problem, Wednesday  
decimal point should be  
put 2 places from its right

So, answer is 67.16

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	1	2	3	4	5	6	7	8	9	10	11	-
20	21	22	23	24	25	26	27	28	29	30	31	-	-

**AUG  
2017**

$$\begin{array}{r}
 \text{L. Q. 65} \\
 \begin{array}{r}
 5 \times 6 + 5 \\
 6 \times 5 + 5 \\
 5 \times 5 + 5 \\
 0 \times 6 + 5 \\
 48 \\
 \hline
 \end{array}
 \end{array}
 = 24 / 68 \quad 76 / 30 \\
 \Rightarrow \boxed{31590}$$

28

Friday

- 1590

decimal point should be put 3 places from the right because decimal points are of %. There is 1 decimal point in 8.6

$S_0$

Answer is 31.59.

2017

## Alternative Method.

1) 108% of 93.

108 100-108  
93 100-93

$$\begin{array}{r} 108 \\ \times 7 \\ \hline 108 - 7 \end{array}$$

= 1011-56

$$= 100 | 100 - 56$$

$\approx 100 / 42$

$$= \underline{\underline{100\text{whl}}}$$

Study : 1) ~~now~~ write down  
108 9 93 vertically  
one below the other.

) subtract 108 from 100  
and 93 from 100

) Again getting the answer  
Cross - subtract the numbers

29

Saturday

30

Sunday

31

JULY

Monday

1) Now, when you get  
 $101 - 56$ ,

2017

transform  $100$  to  ~~$100$~~   $- 56$ ,  
 from  $101$ .

So  $101$  would become  
 $100$  and  
 and

$- 56$  would become  
 $100 - 56 = 44$

2) Because ~~the~~ (cancel forward  
 subtraction)

2)  $10.9\%$  of  $114$ .

$$\begin{array}{r} 109 \\ 114 \end{array} \quad \begin{array}{r} 100 - 109 \\ 100 - 114 \end{array}$$

$$\begin{array}{r} 109 \\ 114 \end{array} \times -9 \\ \cancel{-} -14.$$

$$109 - (-14) | -9 \times -14$$

SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
-	-	-	-	-	-	1	2	3	4	5	6	7	8
18	19	20	21	22	23	24	25	26	27	28	29	30	-

SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
-	-	-	-	-	-	1	2	3	4	5	6	7	8
18	19	20	21	22	23	24	25	26	27	28	29	30	-

AUGUST

1

Tuesday

2017

$$\begin{array}{r} 109 + 14 | -126 \\ 123 | 126 \end{array}$$

$$\begin{array}{r} 12426 \\ = 12 \cdot \underline{\underline{126}} \end{array}$$

2

Wednesday

SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
-	-	-	-	-	-	1	2	3	4	5	6	7	8
17	18	19	20	21	22	23	24	25	26	27	28	29	30

SEP  
2017

3

AUGUST

Thursday

2017

## Addition & Subtraction tricks using Vedic method

$$1) \quad 198 - 87 \\ (+13) \qquad \qquad \qquad (C+13)$$

$$211 - 100$$

$$= 111$$

4

Friday

Step 1) If we add 13 to 87, it would become 100 & so the calculation becomes easier.

So, to balance the equation, we add 13 to 198 also.

2) Now, do the calculation.

JUL  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1	2	3	4	5	6	7	8
16	17	18	19	20	21	22	23	24	25	26	27	28	29

AUGUST

5

Saturday

2017

$$\begin{array}{r}
 2) \quad 658 - 76 \\
 + \quad \quad \quad + \\
 24 \quad \quad \quad 24 \\
 \hline
 682 - 100 \\
 = 582 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 3) \quad 1245 - 989 \\
 + \quad \quad \quad + \\
 11 \quad \quad \quad 11 \\
 \hline
 1256 - 1000 \\
 = 256 \\
 \hline
 \end{array}$$

6

Sunday

### Alternative Method

$$\begin{array}{r}
 i) \quad 456 - 324 \\
 4-3 \mid 5-2 \mid 6-4 \\
 1 \mid 3 \mid 2 \\
 \hline
 = 132 \\
 \hline
 \end{array}$$

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	-	-	-	-	1	2	3	4	5	6	7	8	9	10	11	12	13	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	-	-	-	-	-	16	

SEP  
2017

8

Tuesday

2)  $15,382 - 7056$

$$\begin{aligned} &\Rightarrow 15,382 - 7056 \\ &= 1 | - 0 | 5 - 7 | 3 - 0 | 8 - 5 | 2 - 6 \\ &= 1 | - 2 | 3 | 3 \cancel{1} 7 \\ &= 1 | - 2 | 3 | 2 | 1 0 - 4 \\ &= 1 | - 2 | 3 | 2 | 6 \\ &= 0 | 8 | 3 | 2 | 6 = 8326 \end{aligned}$$

JUL  
2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
-	-	-	-	-	-	-	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	-	-	-	-	-	-

- 1)  $15,382 - 7056$
- 2)  $2^{\text{nd}}$  term of the  $2^{\text{nd}}$  AP  
- term of the  $2^{\text{nd}}$  no.
- 3)  $3^{\text{rd}}$  term of the  $2^{\text{nd}}$  AP  
- term of the  $2^{\text{nd}}$  no.
- 4)  $Do \text{ the forward carry if needed.}$

$$\begin{aligned} &15,382 - 7056 \\ &\Rightarrow 15,382 - 7056 \\ &= 1 | - 0 | 5 - 7 | 3 - 0 | 8 - 5 | 2 - 6 \\ &= 1 | - 2 | 3 | 3 \cancel{1} 7 \\ &= 1 | - 2 | 3 | 2 | 1 0 - 4 \\ &= 1 | - 2 | 3 | 2 | 6 \\ &= 0 | 8 | 3 | 2 | 6 = 8326 \end{aligned}$$

2017

Another method

$$1) 500 - 159 .$$

$$(500+0+0 - 100-50-9)$$

$$(500-100) + (0-50) + (0-9)$$

$$\begin{aligned} &500 - 100 - 9 \\ &= 400 - 9 \\ &= 391 \end{aligned}$$

Step:

1) Break down the numbers into smaller Thursday numbers.

$$2) 746 - 399$$

$$\begin{aligned} &(700+40+6) - (300+90+9) \\ &= (700-300) + (40-90) \\ &\quad + (6-9) \end{aligned}$$

$$= 400 - 10 - 43$$

$$\begin{aligned} &= 400 - 53 \\ &= 347 \end{aligned}$$

AUGUST

9

Wednesday

Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
-	-	-	-	-	-	-	1	2	3	4	5	6	7
17	18	19	20	21	22	23	24	25	26	27	28	29	30

SEP  
2017