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Vedic Maths

Squaring of a number ending with 5:

Multiply the first digit on the left with itself + 1 and put 25 on the end

For example: Find $(45)^2$ =?

Step 1. 45 x 45 = …….25 (in the end)

Step 2. 4x (4+1) = 4 x 5 = 20

Hence the answer will be 2025.

Subtraction from 1000, 10000, 100000 and so on.

You just keep one formula – Subtract all from 9 and the last from 10.

For example: 1000 – 473 =?

We simply subtract each figure in 473 from 9 and the last figure from 10.

Step 1. 9 – 4 = 5

Step 2. 9 – 7 = 2

Step 3. 10 – 3 = 7,So, the answer is 1000 – 473 = 527

Multiplying any number by 5

Take any number, then divide it by 2 (in other words, half the number). If the result is whole, add a 0 at the end. If it is not, ignore the remainder and add a 5 at the end. It works every time:

For example: 2462 x 5 =?

Step 1. 2462 / 2 = 1231

Step 2. Whole number, so add 0

The answer will be 2462 x 5 = 12310

Multiplication of any 2-digit numbers, from 11 to 19

Step 1. Add the unit digit of smaller no. to the larger numeral.

Step 2. Multiply the result by 10.

Step 3. Multiply the unit digits of both numbers.

Step 4. Add both the numbers (involve in step 1 & step 2).For example: Take 2 numbers like 13 and 16.

Step 1. 16 + 3 =19.

Step 2. 19*10 = 190.

Step 3. 3*6 = 18

Step 4. Add the two numbers, 190+18 and the answer is **208**.

Dividing a large number by 5

This trick will get you result quickly of dividing a large digit number by 5. All you need to follow only two steps, in first step multiply the number by 2 while in second step move the decimal point.For example: 235 / 5 =**?**

Step 1. 235 * 2 = 470

Step 2. Move the decimal: 47.0 or just 47

Multiplication of a two-digit number by 11

With this trick, multiplication can be done in 1 or 2 seconds. So, let us see how using this method, calculation can be done in a matter of seconds.

To multiply 25 and 11, imagine there is a space between 25

Step 1. Put an imaginary space in between: 25*11= 2_5

Step 2. Just add 2 and 5 and put the result in the imaginary space

So, the answer is: 25 * 11 =**275**

Multiply any large number by 12

To multiply any number by 12 just double last digit and thereafter double each digit and add it to its neighbour.

For example 13243 * 12 = ?

Step 1: 13243 * 12 = _____6 (Double of Last Digit 3= 6)

Step 2: 13243 * 12 = ____16 (Now Double 4= 8, and add it to 3, 8+3=11, 1 will get carry over)

Step 3: 13243 * 12= ___916 (Now Double 2=4, and add it to 4 with carry, 4+4+1=9)

Step 4. 13243* 12= __8916 (Now Double 3=6, and add it to 2, 6+2=8)

Step 5. 13243 * 12= _58916 (Now Double 1=2, and add it to 3, 1+3=5)

Step 6. 13243 * 12= 158916 (Now Double 0=0, and add it to 1, 0+1=1)

So your final answer of 13243 * 12 = **158916**

Multiplication of any 3-digit numbers

Take any two numbers like 308 and 306

Step 1. Now subtract the number at unit place.308-8=300

Vedic Maths

306-6=300

Step 2. Now select any number and add the unit digit of another number

308+6=314

Step 3. Now multiply, 314×300 = 94200

Step 4. Now multiply the unit digits of both numbers,**Multiplication** 8×6=48

Step 5. Add, 94200+48 = 94248

The product of the numbers 308 and 306 is **94248**

Convert kilograms to pounds quickly

If you want to convert kilograms to pounds, you can do it in your head in few seconds.

Let take an example: Convert 112 Kg to pound.

Step 1: Multiply Kg value by 2, i.e., 112X2= 224

Step 2: Divide the previous one by 10, i.e., 224/10=22.4

Step 3: Add both the number, i.e., 224+ 22.4= **246.4 pounds**.

Trick for finding any square:

Step 1: Choose a base closer to the number whose square is to be found.

Step 2: Find the difference of the number from its base.

Step 3: Add the difference with the number.

Step 4: Multiply the result with the base.

Step 5: Add the product of the square of the difference with the result of the above point

Question: 01

Solve the given question:

93*86

A. 8098
B. 9098
C. 7998
D. 9808

Answer: C

Explanation:

100 -86 = 14, 100 -93 = 7

14 * 7 = 98 (last two digits)

93-14= 86-7 =79

Therefore, the correct answer is 7998

Question: 02

Solve the given question

89*109

A. 9081
B. 9281
C. 9701
D. 9401

Answer: C

Explanation:

100 -89 = 11, 100 -109 = -9

11 * -9 = -99 (100-99=01) (last two digits) (1 borrowed)

109-11-= 89+9 =98 -1 (borrowed) = 97

Therefore, the correct answer is 9701

Question: 03

Find the square of 55

A. 2525
B. 2925
C. 3025
D. 3125

Answer: C

Explanation:

$55^2 \Rightarrow (5 * 6), 25 = 3025$

Question: 04

Find the square of 82

A. 2525
B. 6724
C. 3025
D. 6734

Answer: B

Explanation:

$(82)^2 = 82 - 18 \mid (18)^2 = 6724$

Question: 05

Find the square of 112

A. 11244
B. 12544
C. 13544
D. 14544

Answer: B

Explanation:

$(112)^2$ = 112 + 12 | $(12)^2$ = 144 | (carry 4)44 = 12544

Question: 06

Find the solution for 976 * 653

A. 637328
B. 647358
C. 876458
D. 983458

Answer: A

Explanation:

976 × 653 is calculated as:

Step 1: 6 × 3 = 18 (Write 8 as the last digit and 1 is carried over to the next step)

Step 2: 7 × 3 + 6 × 5 + 1(Carried Over) = 52 (Write 2 and 5 is carried over to the next step)

Step 3: 9 × 3 + 6 × 6 + 7 × 5 + 5 (Carried Over) = 98 (Write 8 and 9 is carried over to the next step)

Step 4: 9 × 5 + 7 × 6 + 9(Carried Over) = 96 (Write 6 and 9 is carried over to the next step)

Step 5: 9 × 6 + 9 (Carried Over) = 63 (Write 39). Therefore, 637328 is the answer.

Question: 07

Find the solution for 494 * 496

A. 235022
B. 245012
C. 245024
D. 235012

Answer: C

Explanation:

Step 1: 500 – 494 = 6, 500 – 496 = 4

Step 2: 6*4 = 24 (last two digits)

Step 3: 494-4 = 496 -6 = 490*5 = 2450 (first 4 digits)

Therefore, the correct answer is 245024

Question: 08

89 * 109

A. 9081
B. 9281
C. 9701
D. 9401

Answer: C

Explanation:

100 -89 = 11, 100 -109 = -9

11 * -9 = -99 (100-99=01) (last two digits) (1 borrowed)

109-11-= 89+9 =98 -1 (borrowed) = 97

Therefore, the correct answer is 9701

Question: 09

Solve 62 * 43

A. 2566
B. 2466
C. 2866
D. 2666

Answer: D

Explanation:

62

43

Step 1: 2 * 3 = 6 (Write 6 which is the single digit number)

Step 2: 6 * 3 + 2 * 4 = 26 (Write 6 and 2 is carried over to the next step)

Step 3: 6 * 4 + 2 (Carried Over) = 26 (Write 26 as this is the last step).

2666 is the answer.

Question: 10

Calculate 109 × 96

A. 10264
B. 10464
C. 10864
D. 10364

Answer: B

Explanation:

109 X 96 is calculated as:

Step 1: 109 -100 = 9, 96-100= -4

Step 2: 9 × -4 = -36, 100 -36 =64(last two digits)

Step 3: 109-4= 96+9 = 105 -1 (borrowed) =104Therefore, the answer is 10464

Question: 11

Calculate 45 × 45

A. 2025
B. 2435
C. 2775
D. 2895

Answer: A

Explanation:

Step I: 5 × 5 = 25 which form R.H.S. part of answer

Step II: 4 × (next consecutive number)

i.e. 4 ×5 = 20, which form L.H.S. part of answer

∴ 45 × 45 = 2025

Question: 12

Calculate 25 × 25

A. 425
B. 625
C. 430
D. 735

Answer: B

Explanation:

Step I: 5 × 5 = 25 which form R.H.S. part of answer

Step II: 2 × (next consecutive number)

i.e. 2 ×3 = 6, which form L.H.S. part of answer

∴ 25 × 25 = 625

Question: 13

Calculate 765 × 999

A. 764235
B. 784275
C. 765255
D. 744230

Answer: A

Explanation:

Step I : The number being multiplied by 9's is first reduced by 1
i.e. 765 – 1 = 764 This is first part of the answer
Step II : "All from 9 and the last from 10" is applied to 765 to get 235, which is the second part of the answer.
∴ 765 × 999 = 764235

Question: 14

Calculate 1863 × 99999

A. 126299137
B. 166298537
C. 186298137
D. 176295134

Answer: C

Explanation:

Step I : Here 1863 has 4 digits and 99999 have 5-digits, we suppose 1863 to be as 01863. Reduce this
by one to get 1862 which form the first part of answer.
47
Step II: Apply ‘All from 9 and last from 10’ to 01863 gives 98137which form the last part of answer
∴ 1863 x 99999 = 186298137

Question: 15

Find the square of 1004

A. 1009016
B. 1508016
C. 1048016
D. 1008016

Answer: D

Explanation:

Step1: For first part add 1004and 04 to get 1008

Step2: For second part $(4)^2 = 16 = 016$ (as, base is 1000 a three digit no.)

$\therefore (1004)^2 = 1008016$

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