FREE COURSE
FOR BBA BBM BMS BCA

DAY 02

MATHS
SIMPLI-FICATION

MAH-CET 2024
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Simplification

Rule of BODMAS

Bracket

$36 + 2 \times 5 + (B \; A)$

BODMAS

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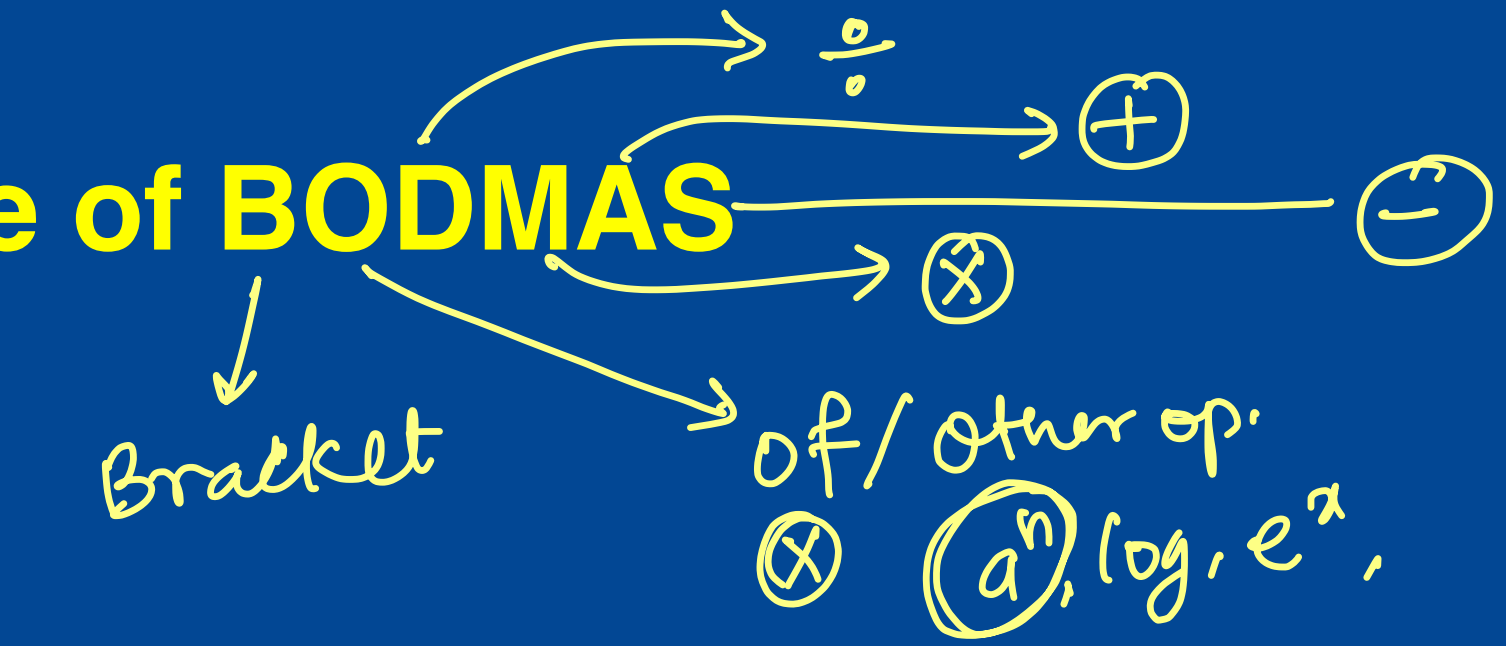
Rule of BODMAS



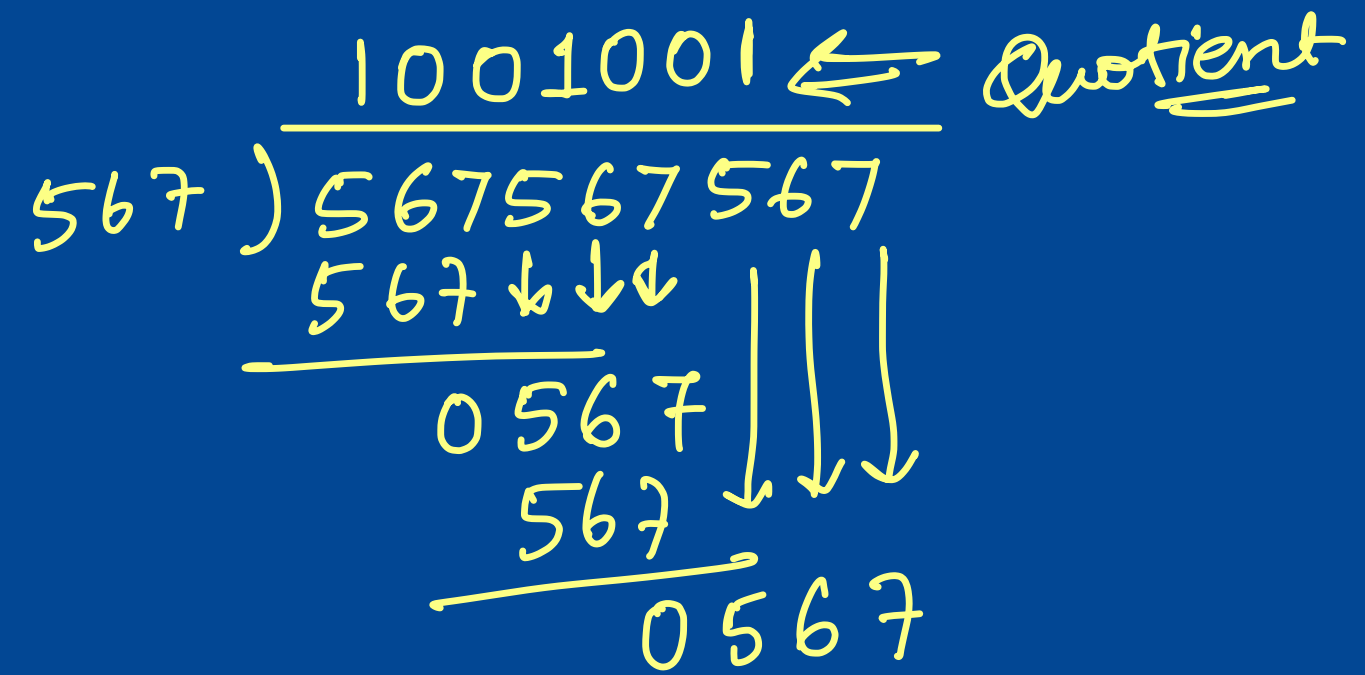
If 5675.67567 is divided by 567, the quotient is

(a) 111

(b) 10101

(c) 1001001

(d) 3



How many $\frac{1}{8}$ are in $\frac{1}{2}$?

(a) 8

(b) 4

(c) 2

(d) 16

$$\frac{1}{2} = \frac{1}{8} \times x$$

$$\frac{8}{2} = x \Rightarrow x = 4$$

When 121012 is divided by 12, the remainder is

(a) 0

(b) 2

(c) 3

(d) 4

$\frac{121012}{12} = 10084$

4

book x y – pencil

Ram went to a market and bought one copy of a Mathematics book and two pencils for Rs.165. Rahim went to the same market and bought another copy of the same book and ten pencils of the same brand for Rs.169. The price of each pencil was

(a) Rs. 0.50

(b) Rs. 1

(c) Rs. 0.75

(d) Rs. 2

Ram 1 2 → 165

Rahim 1 10 → 169

8 → Rs. 4

$x + 2y = 164$

$-x + 10y = 169$

$+8y = +4$

$y = 4/8 = 0.5$

1 pencil = 0.50

Simplify:

$$\frac{\frac{1}{3}+\frac{1}{4}\left[\frac{2}{5}-\frac{1}{2}\right]}{1\frac{2}{3}\,of\,\frac{3}{4}-\frac{3}{4}\,of\,\frac{4}{5}}=?$$

a) $\frac{37}{78}$

b) $\frac{37}{13}$

c) $\frac{74}{78}$

d) $\frac{74}{13}$

$$\frac{\frac{1}{3}+\frac{1}{4}\left(\frac{-1}{10}\right)}{\frac{5}{3}\times\frac{3}{4}-\frac{3}{4}\times\frac{4}{5}}$$

A

$$=\frac{\frac{1}{3}-\frac{1}{40}}{\frac{5}{4}-\frac{3}{5}}=\frac{\frac{40-3}{120}\,{}^{6}}{\frac{25-12}{20}_{1}}=\frac{37}{6\times13}$$

$$\frac{37}{78}$$

$$\frac{\frac{N_1}{D_1}}{\frac{N_2}{D_2}}=\frac{N_1\times D_2}{D_1\times N_2}$$

Conjugate MFD

The value of

$$\frac{1}{\sqrt{2}+1}+\frac{1}{\sqrt{3}+\sqrt{2}}+\frac{1}{\sqrt{4}+\sqrt{3}}+\cdots+\frac{1}{\sqrt{100}+\sqrt{99}}=?$$

$\sqrt{2}-\sqrt{1}+\sqrt{3}-\sqrt{2}+\sqrt{4}-\sqrt{3}+\cdots\sqrt{99}-\sqrt{98}+\sqrt{100}$

$-\sqrt{99}$

a) 1

b) 9

c) $\sqrt{99}$

d) $\sqrt{99}-1$

B

$$\frac{1}{\sqrt{2}+1}=\frac{1}{\sqrt{2}+\sqrt{1}}\times\frac{\sqrt{2}-\sqrt{1}}{\sqrt{2}-\sqrt{1}}=\frac{\sqrt{2}-\sqrt{1}}{(\sqrt{2})^2-(\sqrt{1})^2}$$

$(a+b)$ $(a-b)$

$$=\frac{\sqrt{2}-\sqrt{1}}{1}$$

$$\frac{-\sqrt{1}+\sqrt{100}}{-1+\hookrightarrow 10}=9$$

Which of the following value will come in the place of ?

$$\frac{128 \div 16 \times ? - 7 \times 2}{7^2 - 8 \times 6 + ?^2} = 1$$

a) 17
b) 16
c) 18
d) 3

$$\frac{8x - 14}{49 - 48 + x^2} = 1$$

$$8x - 14 = 1 + x^2$$

$$x^2 - 8x + 1 + 14 = 0$$

$$x^2 - 8x + 15 = 0$$

$$(x-3)(x-5) \Rightarrow x = 3/5$$

15
-3 -5

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$$1+\frac{1}{1+\frac{1}{5}}=?$$

a) 11/6

b) 13/6

c) 15/6

d) None

$$=1+\frac{1}{\frac{6}{5}}=1+\frac{5}{6}=\frac{11}{6}$$

↑ $x, 2x$ → $y, 4y$

A man has some hens and cows. If the number of heads: number of feet = 12: 35, find out the number of hens, if the number of heads alone is 48.

(a) 23

~~(b) 26~~

(c) 24

(d) 22

$\frac{H}{F} = \frac{12}{35}$

$H = 12x$ $\quad F = 35x$

$48 = 12x$ $\quad = 35 \times 4$

$x = 4$ $\quad = 140$

22

$x + y = 48 \Rightarrow x = 26$

$2x + 4y = 140$

$x + 2y = 70$

$-\ x + y = 48$

$y = 22$

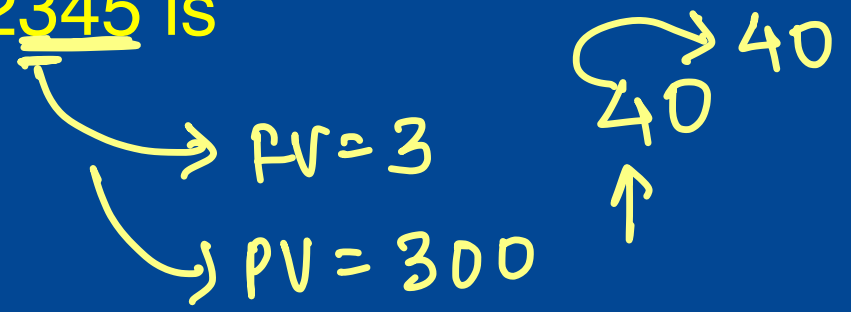
The difference of the place value and the face value of the number 3 in 12345 is

(a) 299

(b) 297

(c) 298

(d) None of the above



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Worksheet

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