

Exercise 4.4

Question: 1

Does there exist a whole number 'a' such that $a/a = a$?

Solution:

Yes, there exists a whole number 'a' such that $a/a = a$.

The whole number is 1 such that,

$$1/1 = 1$$

Question: 2

Find the value of:

Solution:

(i) $23457 / 1 = 23457$

(ii) $0 / 97 = 0$

(iii) $476 + (840 / 84) = 476 + 10 = 486$

(iv) $964 - (425 / 425) = 964 - 1 = 963$

(v) $(2758 / 2758) - (2758 + 2758) = 1 - 1 = 0$

(vi) $72450 / (583 - 58) = 72450 + 525 = 138$

Question: 3

Which of the following statements are true:

Solution:

(i) False

LHS: $10 / (5 \times 2)$

$= 10 / 10$

$= 1$

RHS: $(10 / 5) \times (10 / 2)$

$= 2 \times 5 = 10$

(ii) True

$$\text{LHS: } (35 - 14) / 7$$

$$= 21 / 7$$

$$= 3$$

$$\text{RHS: } 35 / 7 - 14 / 7$$

$$= 5 - 2 = 3$$

(iii) False

$$\text{LHS: } 35 - 14 / 7$$

$$= 35 - 2 = 33$$

$$\text{RHS: } 35 / 7 - 14 / 7$$

$$= 5 - 2$$

$$= 3$$

(iv) False

$$\text{LHS: } (20 - 5) / 5$$

$$= 15 / 5$$

$$= 3$$

$$\text{RHS: } 20 / 5 - 5$$

$$= 4 - 5 = -1$$

(v) False

$$\text{LHS: } 12 \times (14 / 7)$$

$$= 12 \times 2$$

$$= 24$$

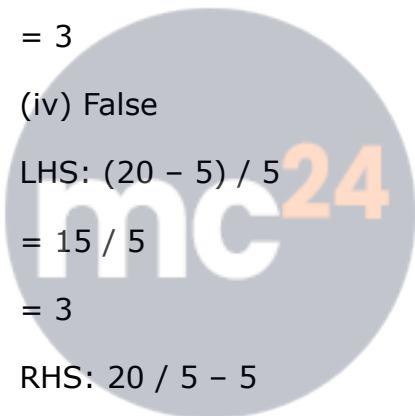
$$\text{RHS: } (12 \times 14) / (12 \times 7)$$

$$= 168 / 84$$

$$= 2$$

(vi) True

$$\text{LHS: } (20 / 5) / 2$$



$$= 4 / 2$$

$$= 2$$

$$\text{RHS : } (20 / 2) / 5$$

$$= 10 / 5$$

$$= 2$$

Question: 4

Divide and check the quotient and remainder:

Solution:

$$(i) 7777 / 58 = 134$$

$$\begin{array}{r} 134 \\ 58 \overline{) 7772} \\ \underline{-58} \\ 197 \\ \underline{-174} \\ 232 \\ \underline{-232} \\ 0 \end{array}$$

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Verification: [Dividend = Divisor \times Quotient + Remainder]

$$7772 = 58 \times 134 + 0$$

$$7772 = 7772$$

$$\text{LHS} = \text{RHS}$$

$$(ii) 6906/35 \text{ gives quotient} = 197 \text{ and remainder} = 11$$

$$\begin{array}{r} 197 \\ 35 \overline{) 6906} \\ \underline{-35} \\ 340 \\ \underline{-315} \\ 256 \\ \underline{-245} \\ 11 \end{array}$$

Verification: [Dividend = Divisor \times Quotient + Remainder]

$$6906 = 35 \times 197 + 11$$

$$6906 = 6895 + 11$$

$$6906 = 6906$$

$$\text{LHS} = \text{RHS}$$

(iii) 16135 / 875 gives quotient = 18 and remainder = 385.

$$\begin{array}{r} 18 \\ 875 \overline{) 16135} \\ \underline{- 875} \\ 7385 \\ \underline{- 7000} \\ 385 \end{array}$$

Verification: [Dividend = Divisor \times Quotient + Remainder]

$$16135 = 875 \times 18 + 385$$

$$16135 = 15750 + 385$$

$$16135 = 16135$$

$$\text{LHS} = \text{RHS}$$

(iv) 16025/1000 gives quotient and remainder = 25

$$\begin{array}{r} 16 \\ 1000 \overline{) 16025} \\ \underline{- 1000} \\ 6025 \\ \underline{- 6000} \\ 25 \end{array}$$

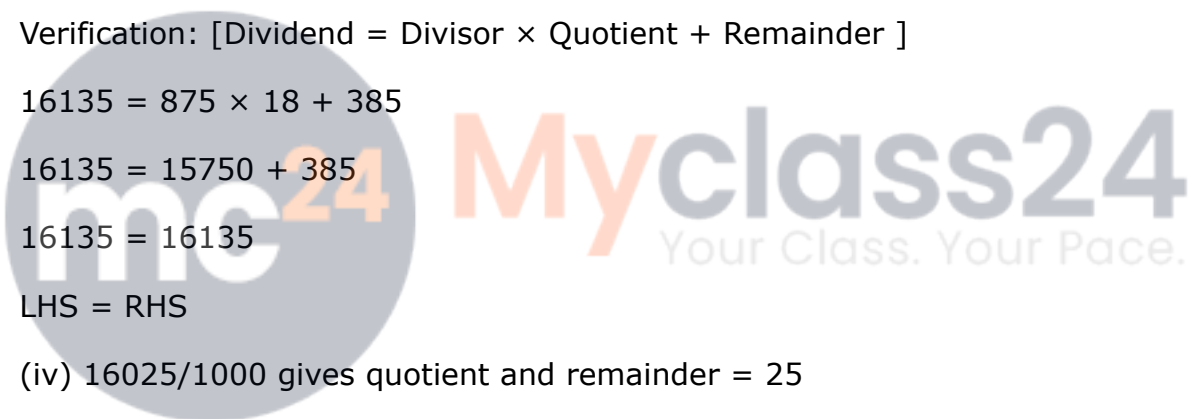
Verification: [Dividend = Divisor \times Quotient + Remainder]

$$16025 = 1000 \times 16 + 25$$

$$16025 = 16000 + 25$$

$$16025 = 16025$$

$$\text{LHS} = \text{RHS}$$



Question: 5

Find a number which when divided by 35 gives the quotient 20 and remainder 18.

Solution:

$$\text{Dividend} = \text{Divisor} \times \text{Quotient} + \text{Remainder}$$

$$\text{Dividend} = 35 \times 20 + 18$$

$$= 700 + 18$$

$$= 718$$

Question: 6

Find the number which when divided by 58 gives a quotient 40 and remainder 31.

Solution:

$$\text{Dividend} = \text{Divisor} \times \text{Quotient} + \text{Remainder}$$

$$\text{Dividend} = 58 \times 40 + 31$$

$$= 2320 + 31$$

$$= 2351$$

Question: 7

The product of two numbers is 504347. If one of the numbers is 1591, find the other.

Solution:

$$\text{Product of two numbers} = 504347$$

$$\text{One of the two numbers} = 1591$$

Let the number be A.

$$\text{Therefore, } A \times 1591 = 504347$$

$$\begin{array}{r}
 317 \\
 1591 \overline{) 504347} \\
 \underline{- 4773} \\
 2704 \\
 \underline{- 1591} \\
 11137 \\
 \underline{- 11137} \\
 0
 \end{array}$$

$$A = 504347 \div 1591 = 317$$

Question: 8

On dividing 59761 by a certain number, the quotient is 189 and the remainder is 37. Find the divisor.

Solution:

$$\text{Dividend} = 59761$$

$$\text{Quotient} = 189$$

$$\text{Remainder} = 37$$

$$\text{Divisor} = A$$

Now, $\text{Dividend} = \text{Divisor} \times \text{Quotient} + \text{Remainder}$

$$59761 = A \times 189 + 37$$

$$59761 - 37 = A \times 189$$

$$59724 = A \times 189$$

$$\text{Therefore, } A = 59724 \div 189$$

$$= 316$$

Question: 9

On dividing 55390 by 299, the remainder is 75. Find the quotient.

Solution:

$$\text{Dividend} = 55390$$

$$\text{Divisor} = 299$$

Remainder = 75

Quotient = A

Dividend = Divisor \times Quotient + Remainder

$$55390 = 299 \times A + 75$$

$$55390 - 75 = A \times 299$$

$$55315 = A \times 299$$

Therefore, $A = 55315 \div 299 = 185$



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