

Exercise 44

Q.1 Does there exist a whole number a such that $a \div a = a$?

Ans. Yes, 1 is the only whole number such that $1 \div 1 = 1$

Q.2 Find the value of:

- (i) $23457 \div 1$ (ii) $0 \div 97$ (iii) $476 + (840 \div 84)$
 (iv) $964 - (425 \div 425)$ (v) $(2758 \div 2758) - (2758 \div 2758)$
 (vi) $72450 \div (583 - 58)$

Solution (i) $23457 \div 1 = 23457$ { As any number divide by 1 gives the same number }

(ii) $0 \div 97 = 0$ { zero is divided by any number gives zero as a result. }

(iii) $476 + (840 \div 84)$
 $= 476 + 10$ ($\because 840 \div 84 = 10$)
 $= 576$

(iv) $964 - (425 \div 425)$ ($\because 425 \div 425 = 1$)
 $= 964 - 1 = 963$

(v) $(2758 \div 2758) - (2758 \div 2758)$
 $= 1 - 1$
 $= 0$

$$\begin{aligned}
 \text{(vi)} \quad & 72450 \div (583-58) \\
 & = 72450 \div 525 \\
 & = 138
 \end{aligned}$$

$$\begin{array}{r}
 138 \\
 525 \overline{) 72450} \\
 \underline{-525} \\
 1995 \\
 \underline{1575} \\
 4200 \\
 \underline{-4200} \\
 0
 \end{array}$$

Q.3 which of the following statements are true.

(i) $10 \div (5 \times 2) = (10 \div 5) \times (10 \div 2)$

(ii) $(35-14) \div 7 = 35 \div 7 - 14 \div 7$

(iii) $35-14 \div 7 = 35 \div 7 - 14 \div 7$

(iv) $(20-5) \div 5 = 20 \div 5 - 5$

(v) $12 \times (14 \div 7) = (12 \times 14) \div (12 \times 7)$

(vi) $(20 \div 5) \div 2 = (20 \div 2) \div 5$

Solution (i) False (ii) True (iii) False

(iv) False (v) False (vi) True

Q.4 Divide and check the quotient and remainder.

(i) $7772 \div 58$

(ii) $6906 \div 35$

(iii) $16135 \div 875$

(iv) $16025 \div 1000$

Solution: (i) $7772 \div 58$

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

To verify

$$\text{Dividend} = (\text{Divisor} \times \text{quotient}) + \text{Remainder}$$

$$\Rightarrow 7772 = (58 \times 134) + 0$$

$$\therefore 7772 = 7772$$

(ii) $6906 \div 35$

we get, quotient = 197

Remainder = 11

To verify

$$\text{Dividend} = (\text{Divisor} \times \text{quotient}) + \text{Remainder}$$

$$\begin{aligned} 6906 &= 35 \times 197 + 11 \\ &= 6895 + 11 \\ &= 6906 \end{aligned}$$

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

(iii) $16135 \div 875$

here, quotient = 18, Remainder = 385

To verify

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

$$= 875 \times 18 + 385$$

$$= 15750 + 385 = 16135 \therefore \text{LHS} = \text{RHS}$$

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

(iv) $16025 \div 1000$

here, quotient = 16
Remainder = 25

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

To check

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

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

$$= 16000 + 25$$

$$= 16025$$

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

Q5 Find a number which when divided by 35 gives the quotient 20 and remainder 18.

Solution, here Divisor = 35, quotient = 20, Remainder = 18.

$$\therefore \text{Dividend} = \text{Divisor} \times \text{quotient} + \text{Remainder}$$

$$= 35 \times 20 + 18$$

$$= 700 + 18 = 718$$

$\therefore$ required number is 718

Q6 Find a number which when divided by 58, gives a quotient 40 and remainder 31.

Sol! $\therefore \text{Dividend} = \text{Divisor} \times \text{quotient} + \text{Remainder}$

$$= 58 \times 40 + 31$$

$$= 2320 + 31 = 2351$$

$\therefore$ required number is 2351

Q.7 The product of two numbers is 504347. If one of the number is 1591. Find the other.

Solution:

$$\begin{aligned}\text{other number} &= \frac{\text{Product of Number}}{\text{one number}} \\ &= \frac{504347}{1591} = 317\end{aligned}$$

$\therefore$ the other number is 317.

Q.8 on dividing 59761 by a certain number, the quotient is 189, and the remainder is 37. Find the Divisor.

Solution: here, Dividend = 59761, quotient = 189
Remainder = 37.

$$\therefore \text{Dividend} = \text{Divisor} \times \text{quotient} + \text{Remainder}$$

$$\begin{aligned}\therefore \text{Divisor} &= \frac{\text{Dividend} - \text{Remainder}}{\text{quotient}} \\ &= \frac{59761 - 37}{189} = \frac{59724}{189} = 316\end{aligned}$$

$\therefore$ Divisor is 316.

Q.9 on dividing 55390 by 299, the remainder is 75. Find the quotient.

$$\begin{aligned}\text{Solution:} \quad \text{quotient} &= \frac{\text{Dividend} - \text{Remainder}}{\text{Divisor}} \\ &= \frac{55390 - 75}{299} = \frac{55315}{299} = 185\end{aligned}$$

$\therefore$ quotient is 185