

$$\begin{aligned}
 1. \quad xy3 - 3yx &= ab5 \\
 100x + 10y + 3 - 300 - 10y - x &= ab5 \\
 99x - 297 &= ab5 \\
 \downarrow & \\
 8 & \\
 792 - 297 &= ab5 \Rightarrow ab5 = 495 \\
 &\Rightarrow a + b = 4 + 9 = 13 \text{ olur.}
 \end{aligned}$$

Cevap: B

2. İfadeleri denklem şeklinde yazıp taraf tarafa toplarsak

$$\begin{aligned}
 AB - xy &= CD \\
 + \quad AB + CD + xy &= 144 \\
 \hline
 2(AB) + CD &= CD + 144 \\
 2(AB) &= 144 \\
 AB &= 72 \text{ ise } A.B = 7.2 = 14 \text{ olur.}
 \end{aligned}$$

Cevap: C

$$\begin{aligned}
 3. \quad x + 8 &= y \\
 y + 7 &= z \\
 + \quad z + 6 &= m \\
 \hline
 x + y + z + 21 &= y + z + m \\
 x + 21 &= m \\
 m - x &= 21 \text{ olur.}
 \end{aligned}$$

Cevap: A

$$\begin{array}{r}
 1001 \\
 x \quad x0x \\
 \hline
 x00x \\
 0000 \\
 + \quad x00x \\
 \hline
 x0xx0x
 \end{array}$$

Cevap: A

$$\begin{aligned}
 5. \quad yz &\Rightarrow 19.(yz) = xyz \\
 x \quad 19 & \\
 \hline
 x \quad y \quad z & \\
 19.(yz) &= 100.x + yz \\
 18.(yz) &= 100.x \\
 \downarrow & \quad \downarrow \\
 9\text{'un katı} & \quad 9\text{'un katı olmalı} \\
 x = 9 &\Rightarrow 18(yz) = 900 \\
 yz &= 50 \\
 \text{O halde } x + y + z &= 9 + 5 + 0 = 14 \text{ olur.}
 \end{aligned}$$

Cevap: D

$$\begin{aligned}
 6. \quad x + 2x + 3x + \dots + nx &= x(1 + 2 + \dots + n) = 9k \\
 x \cdot \left( \frac{n(n+1)}{2} \right) &= 9k \quad n = 8 \text{ olmalı en az} \\
 \underbrace{\hspace{10em}} & \\
 9k \text{ olması yeterli} &
 \end{aligned}$$

Cevap: C

$$\begin{array}{r}
 AB \\
 x \quad 32 \\
 \hline
 KL \\
 + \quad x \quad y \quad z \quad 2. \text{ basamak} \\
 \hline
 1081
 \end{array}$$

2. basamaktaki sayı yanlış yere yazılmış

$$\frac{1081}{23} = AB = 47 \text{ çıkar.}$$

Cevap: D

$$\begin{array}{r}
 8. \quad a b c \\
 \times \quad 23 \\
 \hline
 d e f = 3(abc) \\
 + x y z = 2(abc) \\
 \hline
 605 = 5(abc) \Rightarrow abc = 121
 \end{array}$$

O halde  $def = 3(121) = 363$   
ve  $d + e + f = 3 + 6 + 3 = 12$  olur.

Cevap: B

$$\begin{array}{r}
 9. \quad a b \\
 \times \quad 25 \\
 \hline
 c d e \\
 + mn \\
 \hline
 4715
 \end{array}$$

$$\begin{array}{r}
 a b \\
 \times \quad 205 \\
 \hline
 c d e \\
 000 \\
 + mn \\
 \hline
 4715
 \end{array}
 \Rightarrow ab \cdot 205 = 4715$$

$ab = 23$

O halde  $cde = 5(ab) = 5 \cdot 23 = 115$  olur.

Cevap: D

10.  $100a + 10b + 5 = ab5$  üç basamaklı sayıdır.

$$\begin{array}{r}
 a b 5 \quad | \quad ab \\
 - a b 0 \quad | \quad 10 \\
 \hline
 05
 \end{array}
 \quad (bölüm) + (kalan) = 10 + 5 = 15 \text{ olur.}$$

Cevap: D