

$$\begin{aligned}
 1. \quad x + y &= 200 \\
 y &= 2x + 50 \text{ olduğundan} \\
 x + 2x + 50 &= 200 \\
 3x &= 150 \\
 x &= 50 \text{ gr şeker} \\
 y &= 2 \cdot 50 + 50 = 150 \text{ gr un} \\
 \text{Buna göre, } \frac{50}{200} \cdot 100 &= 25 \text{ dir.}
 \end{aligned}$$

CEVAP: C

$$\begin{aligned}
 2. \quad \begin{array}{r} \%a \\ 400 \end{array} + \begin{array}{r} \%6a \\ 100 \end{array} = \begin{array}{r} \%x \\ 500 \end{array} \\
 \hline
 400 \cdot a + 100 \cdot 6a = 500 \cdot x \\
 4a + 6a = 5x \\
 10a = 5x \\
 x = \%2a \text{ dir.}
 \end{aligned}$$

CEVAP: A

$$\begin{aligned}
 3. \quad \begin{array}{r} \%60 \\ 700 \end{array} + \begin{array}{r} \%90 \\ 800 \end{array} = \begin{array}{r} \%x \\ 1500 \end{array} \\
 \hline
 60 \cdot 700 + 90 \cdot 800 = x \cdot 1500 \\
 420 + 720 = 15 \cdot x \\
 1140 = 15 \cdot x \\
 x = \%76 \text{ dir.}
 \end{aligned}$$

CEVAP: C

$$\begin{aligned}
 4. \quad \begin{array}{r} \%a \\ 4a \end{array} + \begin{array}{r} \%100 \\ 5 \end{array} = \begin{array}{r} \%(a+5) \\ (4a+5) \end{array} \\
 \hline
 4a \cdot a + 100 \cdot 5 = (a+5)(4a+5) \\
 4a^2 + 500 = 4a^2 + 25a + 25 \\
 500 = 25a + 25 \\
 25a = 475 \\
 a = 19 \text{ dur.}
 \end{aligned}$$

CEVAP: B

$$\begin{aligned}
 5. \quad \begin{array}{r} \%30 \\ 40 \end{array} + \begin{array}{r} \%0 \\ x \end{array} = \begin{array}{r} \%20 \\ (40+x) \end{array} \\
 \hline
 40 \cdot 30 + 0 \cdot x = 20 \cdot (40+x) \\
 120 = 80 + 2x \\
 40 = 2x \\
 x = 20 \text{ dir.}
 \end{aligned}$$

CEVAP: B

$$\begin{aligned}
 6. \quad \begin{array}{r} \%40 \\ 60 \end{array} - \begin{array}{r} \%0 \\ x \end{array} = \begin{array}{r} \%50 \\ (60-x) \end{array} \\
 \hline
 40 \cdot 60 - 0 \cdot x = 50 \cdot (60-x) \\
 240 = 300 - 5x \\
 5x = 60 \\
 x = 12
 \end{aligned}$$

CEVAP: C



7.

$$\begin{array}{r} \%19 \quad \%24 \quad \%22 \\ 20 \quad + \quad x \quad = \quad (20 + x) \\ \hline 19 \cdot 20 + 24 \cdot x = 22 \cdot (20 + x) \\ \frac{19 \cdot 20}{10} + \frac{24 \cdot x}{12} = \frac{22 \cdot (20 + x)}{11} \\ 190 + 12x = 220 + 11x \\ x = 30 \text{ dur.} \end{array}$$

CEVAP: D

8.

Karışımın tamamı 8x olsun.

$$\begin{array}{r} \%24 \quad \%24 \quad \%0 \quad \%a \\ 8x \quad - \quad x \quad + \quad x \quad = \quad 8x \\ \hline 24 \cdot 8x - 24 \cdot x + 0 \cdot x = a \cdot 8x \\ 24 \cdot 7 = 8 \cdot a \\ \frac{24 \cdot 7}{3} = 8 \cdot a \\ a = 21 \text{ dir.} \end{array}$$

CEVAP: E

9.

$$\begin{array}{r} \%30 \quad \%30 \quad \%0 \quad \%x \\ 30 \quad - \quad 10 \quad + \quad 10 \quad = \quad 30 \\ \hline 30 \cdot 30 - 30 \cdot 10 + 0 = 30 \cdot x \\ 90 - 30 = 3x \\ 60 = 3x \\ x = 20 \text{ dir.} \end{array}$$

CEVAP: B

10. $12\varnothing \cdot \frac{2\varnothing}{1\varnothing\varnothing} = 24$ lt dökülmüştür. Buna göre,

$$\begin{array}{r} \%5 \quad \%5 \quad \%0 \quad \%x \\ 120 \quad - \quad 24 \quad + \quad 24 \quad = \quad 120 \\ \hline 5 \cdot 120 - 5 \cdot 24 + 0 \cdot 24 = x \cdot 120 \\ 60\varnothing - 12\varnothing + 0 = 12\varnothing \cdot x \\ 60 - 12 = 12 \cdot x \\ 48 = 12x \\ x = \%4 \text{ ile alkol olduğundan} \end{array}$$

$100 - 4 = 96$ 'sı sudur.

CEVAP: E

11. $60 \cdot \frac{1}{4} = 15$ lt dökülmüştür.

$$\begin{array}{r} 60 - 15 = 45 \text{ lt} \\ 45 \cdot \frac{1}{3} = 15 \text{ lt saf alkol eklenmiştir.} \\ \%60 \quad \%60 \quad \%100 \quad \%x \\ 60 \quad - \quad 15 \quad + \quad 15 \quad = \quad 60 \\ \hline 60 \cdot 60 - 60 \cdot 15 + 100 \cdot 15 = x \cdot 60 \\ 360 - 90 + 150 = 6 \cdot x \\ 420 = 6x \\ x = 70 \text{ dir.} \end{array}$$

CEVAP: D

12. İstenen miktar
Tüm miktar
olduğundan,
 $\frac{a}{a+b} \cdot 100 = \frac{100a}{a+b}$ dir.

CEVAP: A



13.

$$\begin{array}{r} \%40 \quad \%0 \quad \%100 \quad \%x \\ 60 \quad - \quad 20 \quad + \quad 10 \quad = \quad 50 \\ \hline 40 \cdot 60 - 0 \cdot 20 + 100 \cdot 10 = x \cdot 50 \\ 240 + 100 = 5x \\ 340 = 5x \\ x = 68 \text{ dir.} \end{array}$$

CEVAP: E

14.

$$\begin{array}{r} \%a \quad \%b \quad \%5ab \\ b \quad + \quad a \quad = \quad a + b \\ \hline a \cdot b + b \cdot a = 5ab \cdot (a + b) \\ 2ab = 5ab \cdot (a + b) \\ 2 = 5a + 5b \\ \frac{2 - 5b}{5} = \frac{5a}{5} \\ a = \frac{2}{5} - b \end{array}$$

CEVAP: D

15. Karışımın tamamı 5x olsun. $5x \cdot \frac{2}{5} = 2x$ bu-
harlaştırılmıştır. Buna göre,

$$\begin{array}{r} \%20 \quad \%0 \quad \%100 \quad \%a \\ 5x \quad - \quad 2x \quad + \quad x \quad = \quad 4x \\ \hline 20 \cdot 5x - 0 \cdot 2x + 100 \cdot x = a \cdot 4x \\ 100 + 100 = 4a \\ 4a = 200 \\ a = 50 \text{ dir.} \end{array}$$

CEVAP: A

16. Başlangıçtaki tüm miktar x olsun,

$$\begin{array}{r} \%30 \quad \%0 \quad \%16 \\ x \quad + \quad 70 \quad = \quad (x + 70) \\ \hline 30 \cdot x + 0 \cdot 70 = 16 \cdot (x + 70) \\ 30 \cdot x = 16 \cdot (x + 70) \\ 15x = 8x + 560 \\ 7x = 560 \\ x = 80 \text{ dir.} \end{array}$$

şeker miktarı $80 \cdot \frac{30}{100} = 24$ gr dir.

CEVAP: E



17.

$$\begin{array}{r} \%20 \quad \%50 \quad \%40 \\ 30 \quad + \quad x \quad = \quad (30 + x) \\ \hline 20 \cdot 30 + 50 \cdot x = 40 \cdot (30 + x) \\ 60 + 5x = 120 + 4x \\ x = 60 \text{ dir.} \end{array}$$

CEVAP: D

18.

$$\begin{array}{r} \%20 \quad \%40 \quad \%30 \\ 15 \quad + \quad x \quad = \quad (15 + x) \\ \hline 20 \cdot 15 + 40 \cdot x = 30 \cdot (15 + x) \\ 30 + 4x = 45 + 3x \\ x = 15 \text{ dir.} \end{array}$$

CEVAP: B

19.

$$\begin{array}{r} \%14 \quad \%24 \quad x \\ 6 \quad + \quad 4 \quad = \quad 10 \\ \hline 14 \cdot 6 + 24 \cdot 4 = x \cdot 10 \\ 84 + 96 = 10 \cdot x \\ 180 = 10 \cdot x \\ x = 18 \text{ ayardır.} \end{array}$$

CEVAP: B

20.

$$\begin{array}{r} \%25 \quad \%0 \quad \%40 \\ 80 \quad - \quad x \quad = \quad (80 - x) \\ \hline 25 \cdot 80 + 0 \cdot x = 40 \cdot (80 - x) \\ 200 = 320 - 4x \\ 4x = 120 \\ x = \%30 \text{ dir.} \end{array}$$

CEVAP: C