

Parten I

1. $|x+2| + |2y-7| = 4$

$$x+2=0 \Rightarrow x=-2$$

- NU

$$2y-7=4 \Rightarrow 2y=11 \Rightarrow y=5,5$$

$$x+2=1 \Rightarrow x=-1$$

- DA

$$2y-7=3 \Rightarrow 2y=10 \Rightarrow y=5$$

$$x+2=2 \Rightarrow x=0$$

- NU

$$2y-7=2 \Rightarrow 2y=9 \Rightarrow y=4,5$$

$$x+2=3 \Rightarrow x=1$$

- DA

$$2y-7=1 \Rightarrow 2y=8 \Rightarrow y=4$$

$$x+2=4 \Rightarrow x=2$$

- NU

$$2y-7=0 \Rightarrow 2y=7 \Rightarrow y=3,5$$

2. $A = \{x \in \mathbb{Z} \mid -5 < x-1 \leq 2\}$

$$x-1=4$$

$$x=-4+1$$

$$x=-3$$

$$x-1=2$$

$$x=3$$

$$A = \{-3, -2, -1, 0, 1, 2, 3\}$$

$$\begin{aligned}
 3. \quad & 16 - 3 \cdot [(-2)^3 \cdot (-3) - 6^2 : (-19 - 21 + 22)] = \\
 & = 16 - 3 \cdot [-8 \cdot (-3) - 36 : (-18)] \\
 & = 16 - 3 \cdot (24 + 2) \\
 & = 16 - 3 \cdot 26 \\
 & = 16 - 78 \\
 & = \boxed{-62}
 \end{aligned}$$

Partea a II - a

$$1. \quad a) \quad 100x - \frac{25}{100}x + \frac{20}{100} \cdot (x - \frac{25}{100}x) = 720$$

$$\frac{100x}{100} - \frac{25x}{100} + \frac{20}{100} \cdot \frac{75x}{100} = 720$$

$$\frac{75x}{100} + \frac{150x}{1000} = 720$$

$$\frac{90x}{100} = 720$$

$$x = \frac{720 \cdot 100}{90} = 800$$

$$b) \quad \frac{800 - 720}{800} \cdot 100 =$$

$$\frac{80}{800} \cdot 100 = \frac{8000}{800} = 10\%$$

$$2. \quad x + x + \frac{x}{2} + \frac{x}{5} + 1 = 100$$

$$\frac{1}{2}x + \frac{2}{5}x + \frac{x}{5} + 1 = 100$$

$$\frac{2x}{5} + \frac{2x}{5} + \frac{x}{5} = 99$$

$$\frac{4x}{5} = 99$$

$$x = \frac{99 \cdot 5}{4} = 36$$

Partea a III-a

1. $\begin{array}{cc} 23 & 42 & 17 & 33 \\ 56 & 68 & 87 & 99 \end{array}$

2. Suma a două numere este 70. Aflați numerele știind că unul dintre ele este mai mare cu 10 decât celălalt.

$$x + (x + 10) = 70$$

$$2x + 10 = 70 / -10$$

$$2x = 60$$

$$x = 30 \text{ (primul număr)}$$

$$30 + 10 = 40 \text{ (al doilea număr)}$$