

## Muzica rațiunii

### Barem de evaluare

Matematică

Clasa a V-a

04.05.2026

1p-oficiu

#### Subiectul 1

Notăm cu a, b, c sumele primite de fiecare muncitor (0,5 p)

$a+b+c=1575$  ;  $a=2(b+c)$  ; atunci  $b+c=525$  (1,5p)

$a=1050$  ;  $c=15+b$  ;  $b=255$  ;  $c=270$  (1p)

#### Subiectul 2

$$\left(\frac{x+1}{2} - 1\right) + \left(\frac{x+2}{3} - 1\right) + \left(\frac{x+3}{4} - 1\right) + \dots + \left(\frac{x+10}{11} - 1\right) = 0 \quad (1p)$$

$$(x-1)\left(\frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots + \frac{1}{11}\right) = 0 \quad (1p)$$

$$x=1 \quad (1p)$$

#### Subiectul 3

$$A=n\left(\frac{3}{2} \cdot \frac{4}{3} \cdot \dots \cdot \frac{n+1}{n} - \frac{1}{2} \cdot \frac{2}{3} \cdot \frac{3}{4} \cdot \dots \cdot \frac{n-1}{n}\right) \quad (1p)$$

$$A=n\left(\frac{n+1}{2} - \frac{1}{n}\right) = \frac{n(n+1)}{2} - 1 \quad (1p)$$

$n(n+1)$  par ; A este număr natural (1p)

