

241. Izračunajte: $\frac{1}{20} + \frac{1}{30} + \frac{1}{42} + \dots + \frac{1}{2756}$.

1. 49/212

2. 49/213

3. 49/214

4. 49/215

$$\frac{1}{20} + \frac{1}{30} + \frac{1}{42} + \dots + \frac{1}{2756} =$$

$$= \frac{1}{4 \cdot 5} + \frac{1}{5 \cdot 6} + \frac{1}{6 \cdot 7} + \dots + \frac{1}{52 \cdot 53} =$$

$$= \frac{1}{4 \cdot 5} + \frac{1}{5 \cdot 6} + \frac{1}{6 \cdot 7} + \dots + \frac{1}{51 \cdot 52} + \frac{1}{52 \cdot 53} =$$

$$= \frac{5-4}{4 \cdot 5} + \frac{6-5}{5 \cdot 6} + \frac{7-6}{6 \cdot 7} + \dots + \frac{52-51}{51 \cdot 52} + \frac{53-52}{52 \cdot 53} =$$

$$= \frac{5}{4 \cdot 5} - \frac{4}{4 \cdot 5} + \frac{6}{5 \cdot 6} - \frac{5}{5 \cdot 6} + \frac{7}{6 \cdot 7} - \frac{6}{6 \cdot 7} + \dots + \frac{52}{51 \cdot 52} - \frac{51}{51 \cdot 52} + \frac{53}{52 \cdot 53} - \frac{52}{52 \cdot 53} =$$

$$= \frac{1}{4} - \frac{1}{5} + \frac{1}{5} - \frac{1}{6} + \frac{1}{6} - \frac{1}{7} + \dots + \frac{1}{51} - \frac{1}{52} + \frac{1}{52} - \frac{1}{53} =$$

$$= \frac{1}{4} - \frac{1}{53} = \frac{53-4}{4 \cdot 53} = \frac{49}{212}$$