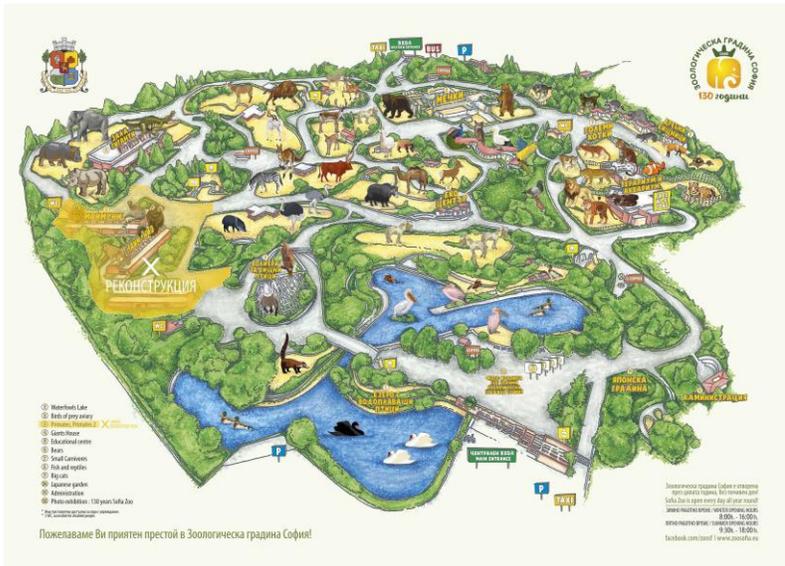


SOFIA - MY CITY



**TARGET GROUP - STUDENTS FROM
5-th GRADE – 11-12 YEARS**

**15. HIGH SCHOOL
"ADAM MITSKEVICH"
SOFIA
BULGARIA**



Task 1

One of the inhabitants of the Sofia Zoo is a cat lemur. Mama Pisana and her three little kittens Abby, Billy and Vicki ate well during the day. Abby ate $\frac{3}{20}$ of the total daily ration, Billy - $\frac{1}{5}$ of this ration, and Vicki - $\frac{3}{10}$ of it. Mama Pisana ate the remaining 105 grams.

Find the missing numbers in the text:

The three little kittens ate a total of portions of the daily ration for the four cats. For mother Pisana there are parts left. The daily ration for the four cats was grams. Abby ate grams. They were - grams, and Vicki grams.



Task 1

- $3/20 + 1/5 + 3/10 = 3/20 + 4/20 + 6/20 = 13/20$ of the daily ration ate the three little kittens
- $1 - 13/20 = 20/20 - 13/20 = 7/20$ of the daily ration was eaten by mother Pisana
- We mean by x grams is the daily ration $7/20$ of $x = 105$

- $3/20$ of 300 = 45 grams for Abby
- $1/5$ of 300 = 60 grams for Billy
- $3/10$ of 300 = 90 grams for Vicki

- *The three little kittens ate a total of portions of **13/20** the daily ration for the four cats. For mother Pisana there were **7/20** parts left. The daily ration for the four cats was **300** grams. Abby ate **45** grams. They were - **60** grams, and Vicki **90** grams.*

Схема на софийското метро

Sofia Metro map



Легенда:
Legend:



Task 2

In May 2015, another part of the first diameter of the Sofia metro was put into operation - from the metro station "Expocenter" to the metro station "Sofia Airport". At last: 4 New metro stations are added to the already existing 16 for the first diameter (Obelya - Sofia Airport).

What part are the added to Metro stations:

- A) from the existing one
- B) all for the first diameter?

Task 2

a) x from $16 = 4$

$$x \cdot 16 = 4$$

$$x = 4 : 16$$

$$x = 4/16$$

$$x = 1/4$$

б) x from $20 = 4$

$$x \cdot 20 = 4$$

$$x = 4 : 20$$

$$x = 4/20$$

$$x = 1/5$$



Task 3

In the North Park, Sofia, Nadezhda district, 600 flowers were planted, $\frac{1}{3}$ of which were tulips, $\frac{1}{5}$ - violets and $\frac{1}{5}$ - irises, and the remaining $\frac{1}{2}$ were roses and the others - lily of the valley. What part of all flowers are lily of the valley and what is the number of flowers of each species?



Task 3

$$1/3 \text{ of } 600 = 1/3 \cdot 600 = 200 \text{ tulips}$$

$$1/5 \text{ of } 600 = 1/5 \cdot 600 = 120 \text{ violets}$$

$$1/5 \text{ of } 600 = 1/5 \cdot 600 = 120 \text{ irises}$$

$$600 - (200 + 2 \cdot 120) = 600 - (200 + 240) = 600 - 440 = 160 \text{ roses and lily of the valley}$$

$$1/2 \text{ of } 160 = 1/2 \cdot 160 = 80 \text{ roses}$$

$$160 - 80 = 80 \text{ lily of the valley}$$

$$x \text{ from } 600 = 80$$

$$x \cdot 600 = 80$$

$$x = 80/600$$

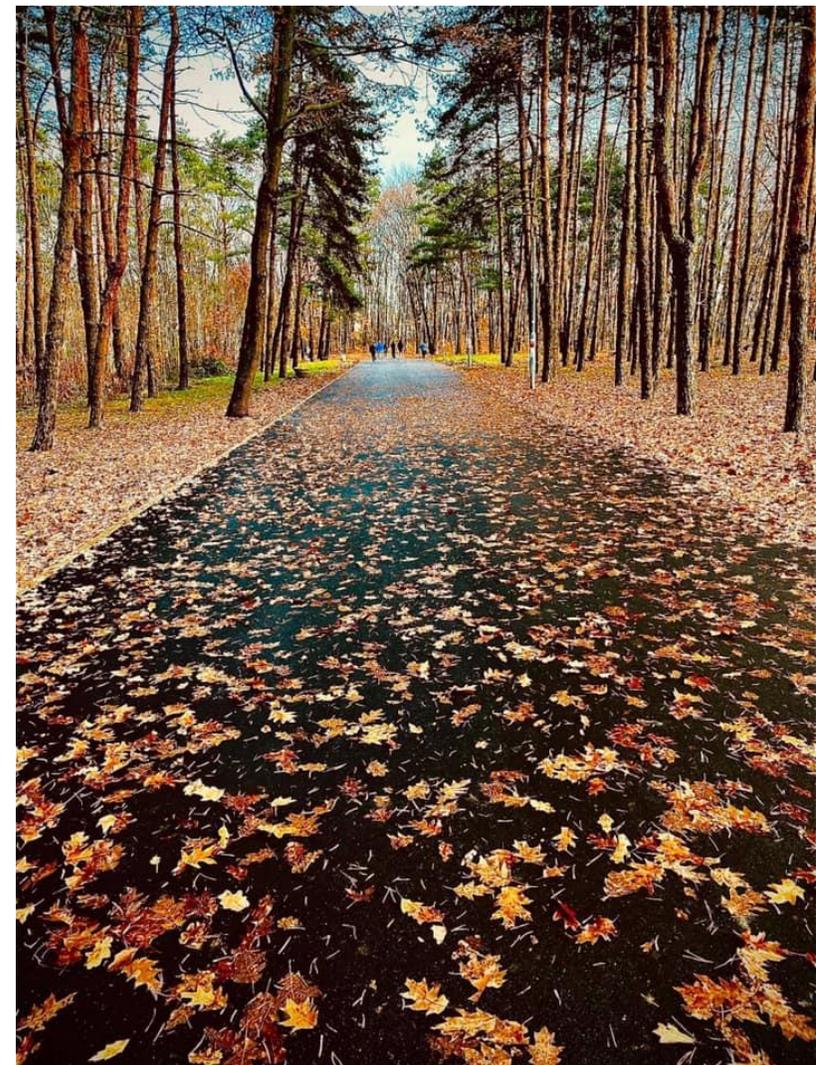
$$x = 2/15 \text{ parts of all flowers is the lily of the valley}$$



Task 4

One brigade paved a pedestrian alley in the North Park, which has an area of 108 square meters. The first day was paved $\frac{1}{3}$ of the entire area, the second day - $\frac{1}{3}$ of the rest, and the third day - $\frac{1}{3}$ of the new rest.

How many square meters are left for paving after the third day?



Task 4

$1 / 3$ from **108** = $1 / 3 \cdot 108 = 36$ square meter (*I* day)

$1 / 3$ from **(108 - 36)** = $1 / 3 \cdot 72 = 24$ square meter (*II* day)

$1 / 3$ from **(72 - 24)** = $1 / 3 \cdot 48 = 16$ square meter (*III* day)

48 - 16 = 32 square meters should be paved after the third day



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Thank you for your attention!