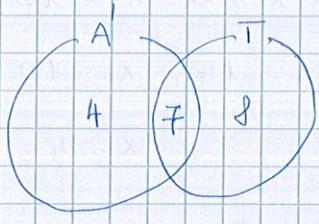


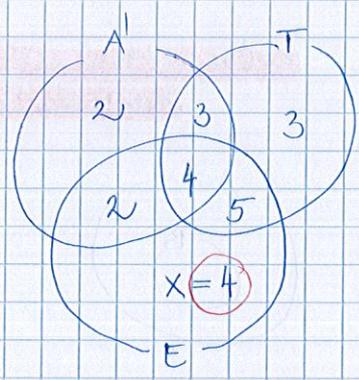
1.) a.)



$$23 - (4 + 7 + 8) = 23 - 19 = 4$$

4 elkerest nem talált meg egyikőjüket sem.

b.)



$$4 + 3 + 5 + 2 + 2 + 3 + X = 23$$

↓
↓
↓

mindkét
ketten
1-1 fő

$$19 + X = 23$$

$$X = 4$$

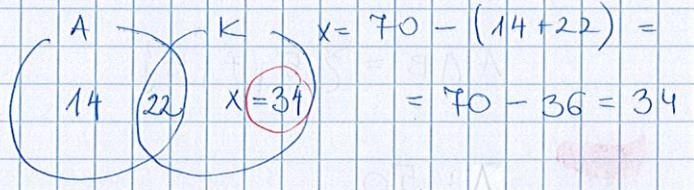
c.) d.) nem tartozik a felméréshez

2.)

Σ : 700 tanuló

sportol: 10% → 70 tanuló
(atl., kosár)

a.)



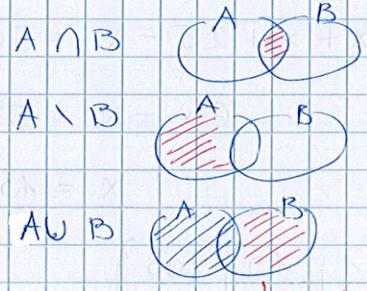
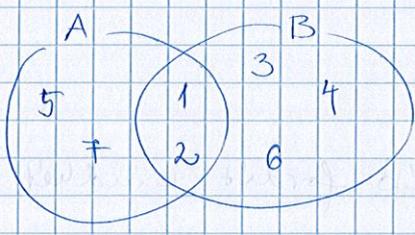
$$X = 70 - (14 + 22) = 70 - 36 = 34$$

b.)

A kosárlabda szakosztályban $22 + 34 = 56$ tanuló sportol.

c.) nem tartozik a felméréshez

3.)



ebben a sorrendben töltjük ki

↳ ide kerülnek, amiket meg nem látunk

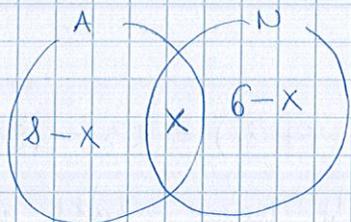
$$A = \{1; 2; 5; 7\}$$

$$B = \{1; 2; 3; 4; 6\}$$

Az A és B elemei a

mellet IS BELETARTOZIK!!!

4.)



$$8 - x + x + 6 - x = 10$$

$$14 - x = 10$$

$$x = 4$$

4-en benélik mindkét ugebet.

5.)

$$11 = \{16; 25; 36; 49; 64; 81\}$$

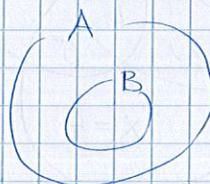
négyzetes szám: a term.
kalkuláció négyzeteké

6.)

$$|A| = 518$$

$$|B| = 27$$

$$B \subset A$$



$$A \cap B = B$$

$$|A \cap B| = 27$$

7.)

$$A = \{4; 5; 6; 7; 8; 9\}$$

$$B = \{1; 3; 5; 7; 9; 11; 13; 15; 17; 19\}$$

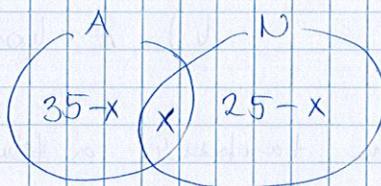
$$A \cap B = \{5; 7; 9\}$$

8.)

$$\Sigma: 50$$

$$A: 0,7 \cdot 50 = 35$$

$$N: 0,5 \cdot 50 = 25$$



$$35 - x + x + 25 - x = 50$$

$$60 - x = 50$$

$x = 10$ forduló forduló mindkét ugebet.

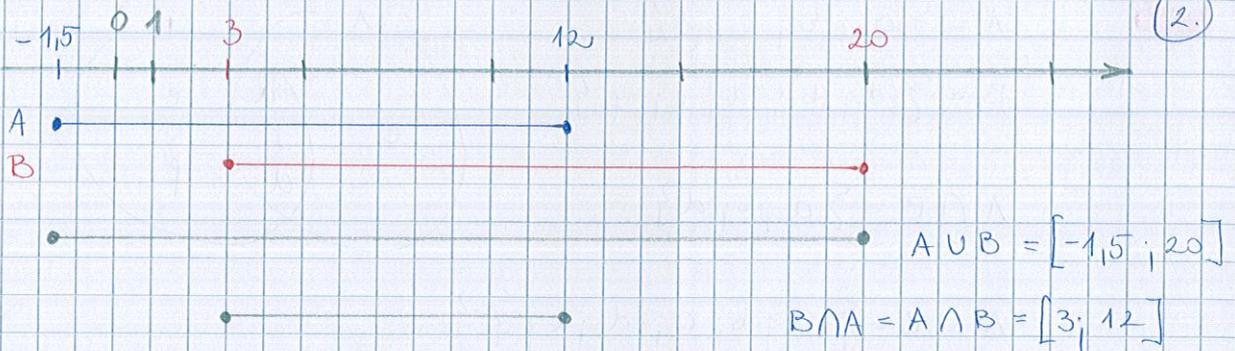
9.)

$$A = \{1; 10; 100\}$$

kétféleképpen lehet kiválasztani:

$$\{1; 10\}; \{1; 100\}; \{10; 100\}$$

10.



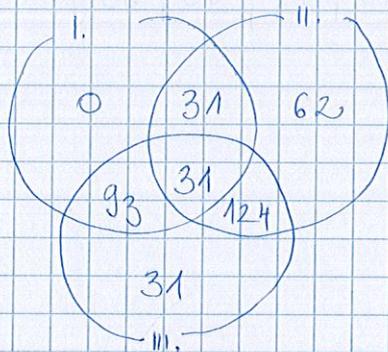
11.

$$A = \{2; 3; 5; 7\}$$

$$B = \{6; 12; 18; 24; 30\}$$

$$A \cup B = \{2; 3; 5; 6; 7; 12; 18; 24; 30\}$$

12.

 Σ : 620 tanuló


I. Dicsőke hangja

II. Iskolaélet

III. Milyen a meli!

$$I. \quad 620 \cdot 0,25 = 155$$

$$I. + II. \quad 620 \cdot 0,1 = 62$$

$$II. \quad 620 \cdot 0,4 = 248$$

$$I + III. \quad 620 \cdot 0,2 = 124$$

$$III. \quad 620 \cdot 0,45 = 279$$

$$II + III. \quad 620 \cdot 0,25 = 155$$

$$I + II + III. \quad 620 \cdot 0,05 = 31$$

a.) Mindkét körrel 31 tanuló olvasta.

b.) ld. a fenti ábrán

c.) Akik legalább az egyik kiadványt olvasták:

$$0 + 62 + 31 + 31 + 93 + 124 + 31 = 372$$

az egyiket

kettőt

mindkétet

$$\frac{372}{620} = 0,6 = 60\%$$

A tanuló 60%-a olvasta legalább az egyik kiadványt.

d.) nem tartozik a kéma körhöz.

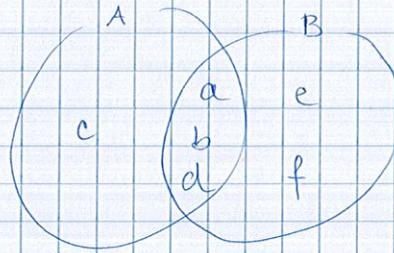
13.

$$A = \{a, b, c, d\}$$

$$B = \{a, b, d, e, f\}$$

$$A \cap B = \{a, b, d\}$$

$$A \cup B = \{a, b, c, d, e, f\}$$



14.

$$A = \{15, 25, 35, 45, 55, 65, 75, 85, 95\}$$

$$B = \{18, 27, 36, 45, 54, 63, 72, 81, 90, 99\}$$

$$A \cap B = \{45\}$$

$$A \setminus B = \{15, 25, 35, 55, 65, 75, 85, 95\}$$

15.

$$a.) \mathbb{N} \cap \mathbb{Z} = \mathbb{N}$$

$$b.) \mathbb{Z} \cup \emptyset = \mathbb{Z}$$

$$c.) \emptyset \setminus \mathbb{N} = \emptyset$$

16.

a.)

	A	B	C
114	nem e.	elem	nem e.
52	elem	nem e.	elem
78	elem	elem	nem e.
124	nem e.	nem e.	elem
216	nem e.	elem	elem

b.) FIGYELJ !!! nem csak a példák elemei

az egyes tulajdonságai !!!

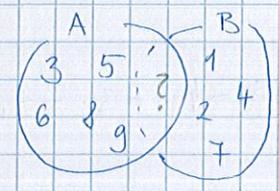
$$A \cap B \cap C = \{100 - \text{nál nem nagyobb, 12-vel osztható poz. egész számok}\}$$

$$A \cap B \cap C = \{12, 24, 36, 48, 60, 72, 84, 96\}$$

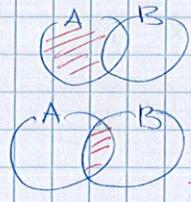
$$|A \cap B \cap C| = 8$$

c.) nem tartozik a felülethez

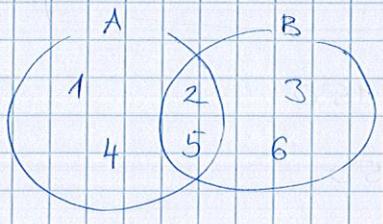
17. $A \cup B = \{1; 2; 3; 4; 5; 6; 7; 8; 9\}$
 $B \setminus A = \{1; 2; 4; 7\}$
 $A = \{3; 5; 6; 8; 9\}$



18. $A \cup B = \{1; 2; 3; 4; 5; 6\}$
 $A \setminus B = \{1; 4\}$
 $A \cap B = \{2; 5\}$



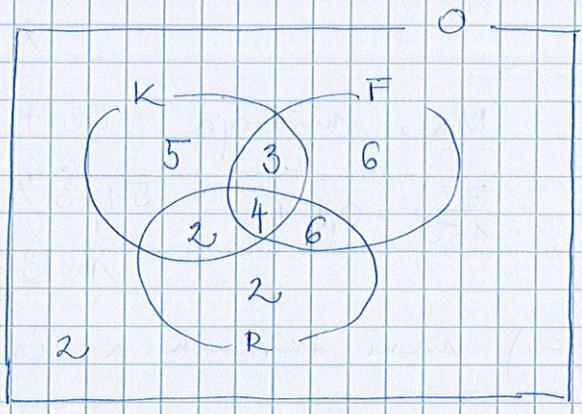
EZEKSEL KELL KEZDENI!



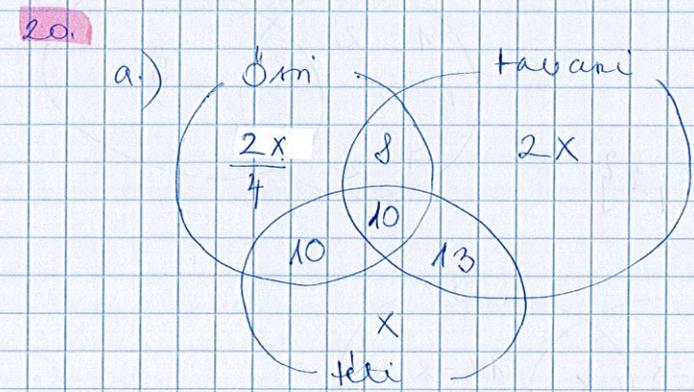
$A = \{1; 2; 4; 5\}$
 $B = \{2; 3; 5; 6\}$

A két halmazba a METSZET IS bele-tartozik!!!

19. Σ : 30 tanev a.)
 K : 14
 F : 19
 R : 14
 senyegyre: 2



b-d.) nem tartozik a téma körhöz



egyikén sem: \emptyset

b.) Σ : 188

$$\frac{x}{2} + 2x + x + 8 + 10 + 13 + 10 = 188$$

csak egyen kétőn mindháromon

$$3,5x + 41 = 188$$

$$3,5x = 147$$

$$x = 42$$

42-en szerepeltek csak héten.

c.) nem tartozik a téma körhöz.

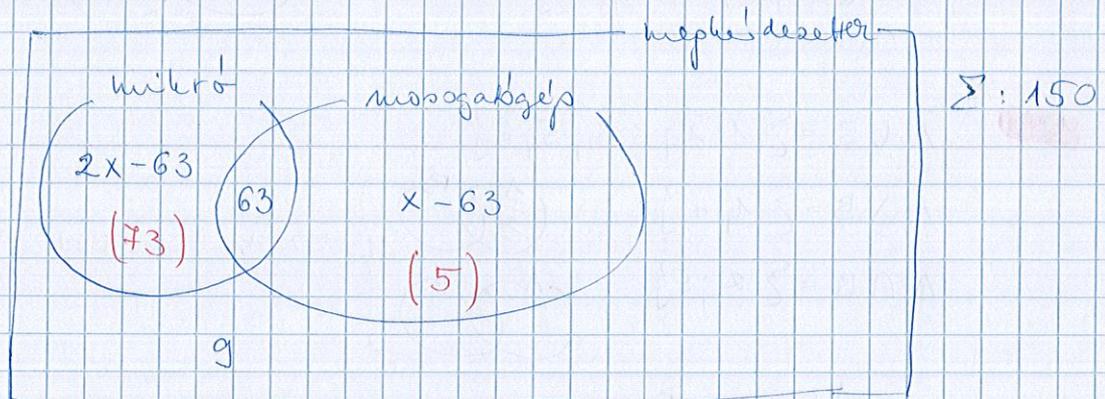
21. $A = \{-4; -3; -2; -1; 0; 1\}$

$B = \mathbb{Z}^+$

$A \setminus B = \{-4; -3; -2; -1; 0\}$

22.

a.)



$$2x - 63 + 63 + x - 63 + 9 = 150$$

$$3x - 54 = 150$$

$$3x = 204$$

$$x = 68$$

Mihasz mikrója: $63 + 5 + 9 = 77$

$$\frac{77}{150} = 0,513$$

51,3%-os hasz mikróval
működő állapotban.

b-c.) nem tartozik a téma körbe

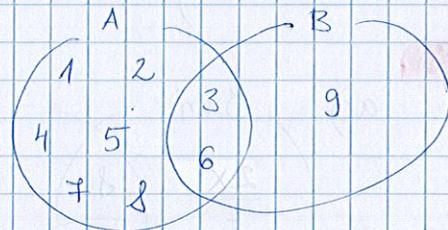
23.

$A = \{1; 2; 3; 4; 5; 6; 7; 8\}$

$B = \{3; 6; 9\}$

$A \cap B = \{3; 6\}$

$A \setminus B = \{1; 2; 4; 5; 7; 8\}$

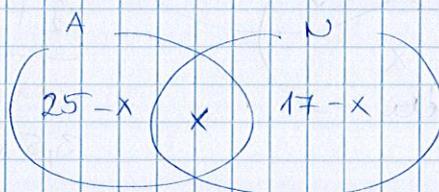


24.

$\Sigma: 30$ fő

A: 25 fő

N: 17 fő



$$25 - x + x + 17 - x = 30$$

12-en tanulják

$$42 - x = 30$$

mindkét nyelvet.

$$x = 12$$

25.

$$\Sigma: 600$$

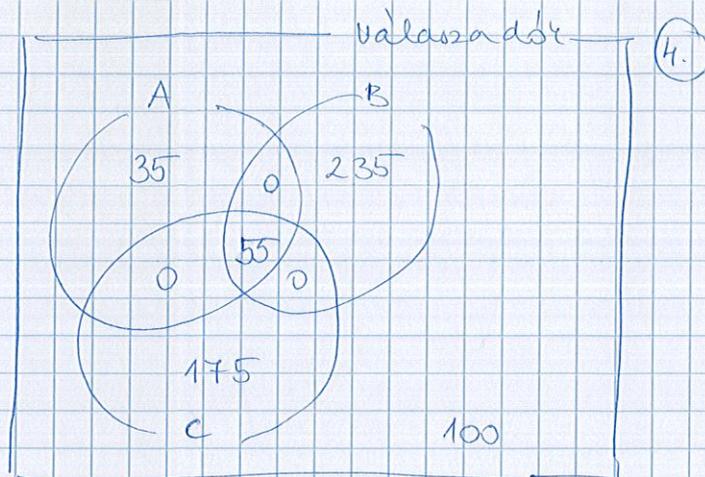
$$A: 90$$

$$B: 290$$

$$C: 230$$

post 2 csoport: 0

mindhárom: 55



$$35 + 175 + 235 + 55 = 500$$

$$600 - 500 = 100 \text{ nem}$$

méltó egyike sem.

a.) $\frac{90}{600} = 0,15 = 15\%$ méltó az A csoportot.

b.) 100 válaszadó egyike sem méltó.

c.) nem tartozik a felrakörhöz

26. nem tartozik ide.

10/10/10

1. The first part of the question is to find the area of the shaded region.

The diagram shows a circle with center O and radius 5 cm. A chord AB is drawn such that the angle AOB is 60 degrees.

The shaded region is the area between the chord AB and the arc AB.

To find the area of the shaded region, we first find the area of the sector OAB.

The area of a sector is given by the formula: $\frac{\theta}{360} \times \pi r^2$

where θ is the angle in degrees and r is the radius.

So, the area of sector OAB is $\frac{60}{360} \times \pi \times 5^2 = \frac{1}{6} \times \pi \times 25 = \frac{25\pi}{6}$ cm².

Next, we find the area of the triangle OAB.

Since the angle AOB is 60 degrees and the radii OA and OB are both 5 cm, the triangle OAB is an equilateral triangle.

The area of an equilateral triangle with side length s is given by the formula: $\frac{\sqrt{3}}{4} s^2$

So, the area of triangle OAB is $\frac{\sqrt{3}}{4} \times 5^2 = \frac{25\sqrt{3}}{4}$ cm².

Finally, the area of the shaded region is the area of the sector minus the area of the triangle.

Area of shaded region = $\frac{25\pi}{6} - \frac{25\sqrt{3}}{4}$ cm².

Therefore, the area of the shaded region is $\frac{25\pi}{6} - \frac{25\sqrt{3}}{4}$ cm².

The second part of the question is to find the perimeter of the shaded region.

The perimeter of the shaded region is the sum of the length of the chord AB and the length of the arc AB.