Tervetuloa matematiikan ihmeelliseen maailmaan!

DragonBox 1. luokka

Tehtäväkirja 1B

Nimi: .....

Luokka: .....

DragonBox 1 on osa DragonBox 1-7 oppimateriaaleja.
Oppimateriaalit noudattavat matematiikan opetussuunnitelmaa POPS2016.

Dragonbox Finland Oy 2019
3. painos
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www.dragonbox.fi

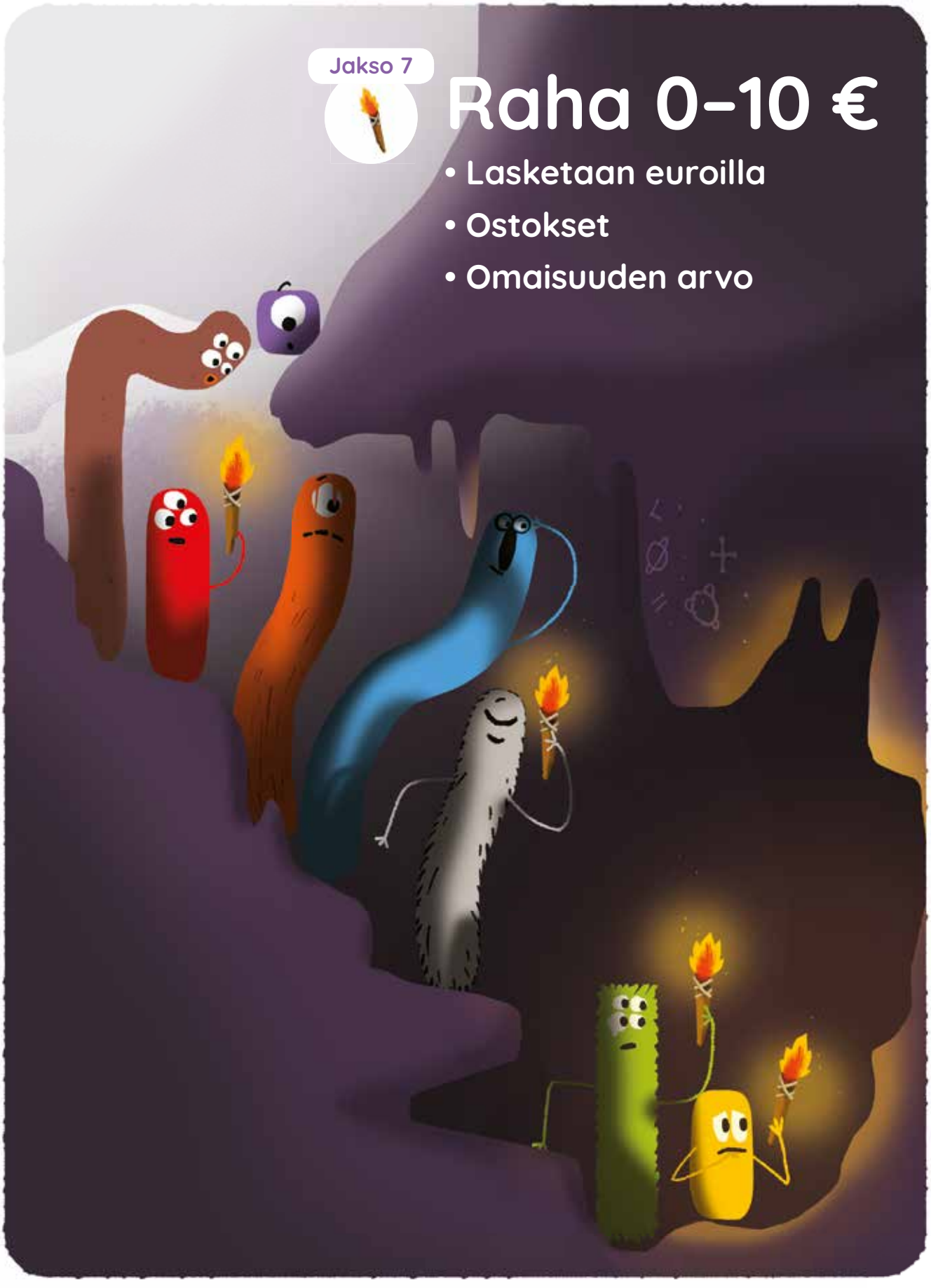
Syyslukukausi

Kevätlukukausi

Jakso 7

Raha 0–10 €

- Lasketaan euroilla
- Ostokset
- Omaisuuden arvo



7.1 Las-ke-taan eu-roil-la

A **Las-ke.** Kuin-ka pal-jon ra-haa on yh-teen-sä?

6 €

3 €

B **Las-ke.** Kuin-ka pal-jon ra-haa on yh-teen-sä?

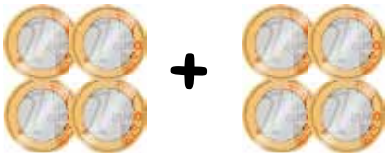
= 5 €

= 10 €

= 5 €

= 9 €

= 8 €



= 8 €

C **Piir-rä** ra-hat. Käy-tä mah-dol-li-sim-man vä-hän ko-li-koi-ta ja se-te-lei-tä.

4 € = 2 2

6 € = 5 1

8 € = 5 2 1

7 € = 5 2

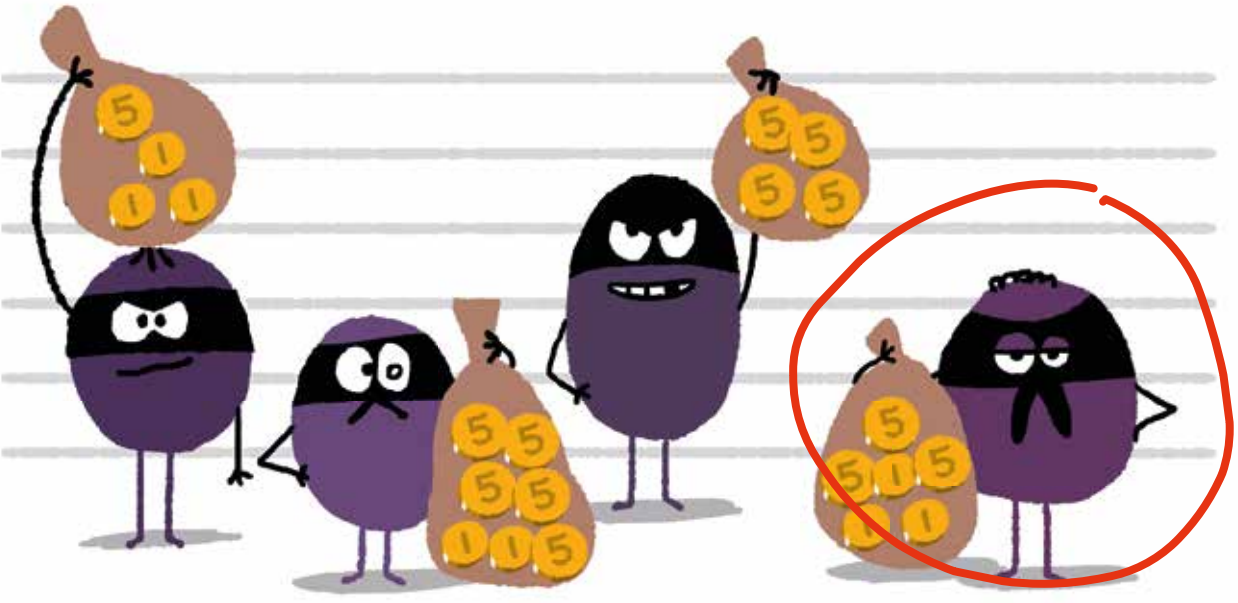
5 € = 5

10 € = 10

Sovelluksen koodi

A Kuvat viittaavat sovellukseen, jossa koneeseen syötetään rahaa ja kone muuttaa rahat euron kolikoiksi. Tavoitteena on ymmärtää rahan arvo ja kerrata yhteenlaskua.

D **Poh-di** ja pe-rus-te-le. Ku-ka on va-ras?



Vain yhdellä varkaalla on säkissään kadonneet kolikot. Säkissä on myös ylimääräinen kolikko, kenties aikaisemmasta varkaudesta. On kuitenkin myös mahdollista , että esimerkiksi ensimmäinen nenukki vasemmalta on syyllinen: hän on saattanut hukata yhden kolikon.

D Tehtävässä harjoitellaan päättelemistä ja perustelemista. On tärkeää harjoitella omien vastausten perustelemista ja huomata, että tehtävissä voi olla myös useita oikeita ratkaisuja.

7.2 Os-tok-set 1–10 €

A **Täy-den-nä** lu-vut. Tehtävässä on useita vastauksia.

4 € + 5 € = 9 €

2 € + 5 € = 7 €

4 € + 4 € = 8 €

7 € + 3 € = 10 €

5 € + 4 € = 9 €

5 € + 3 € = 8 €

2 € + 5 € = 7 €

4 € + 3 € = 7 €

B **Las-ke.** Kuin-ka pal-jon vaih-to-ra-ha ja os-tos o-vat yh-teen-sä?

5 € + 1 € = 6 €

2 € + 5 € = 7 €

3 € + 5 € = 8 €

5 € + 2 € + 3 € = 10 €

4 € + 5 € = 9 €

8 € + 1 € = 9 €

Sovelluksen koodi

C Jat-ka.

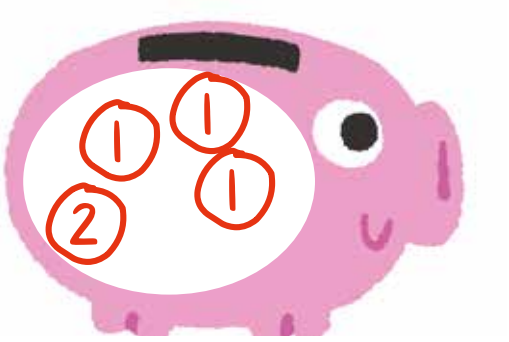
€ € € € € € € € €

€ € € € € € € € €

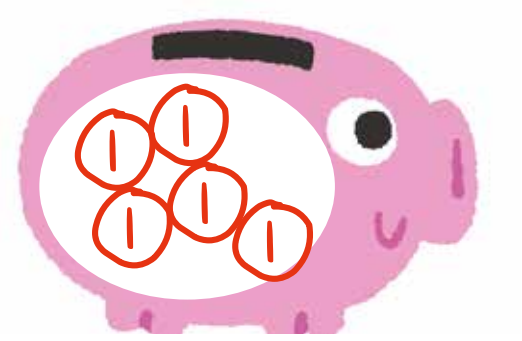
D Piir-rä sääs-tö-por-sai-siin vii-si eu-ro-a e-ri ta-voin. Mer-kit-se las-ku.

Pulmapalat

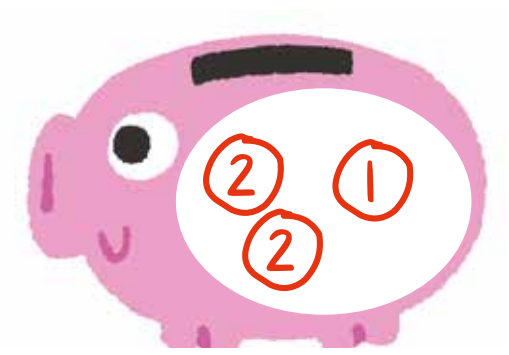
5 € = 5€+0€



5 € = 2€+1€+1€+1€



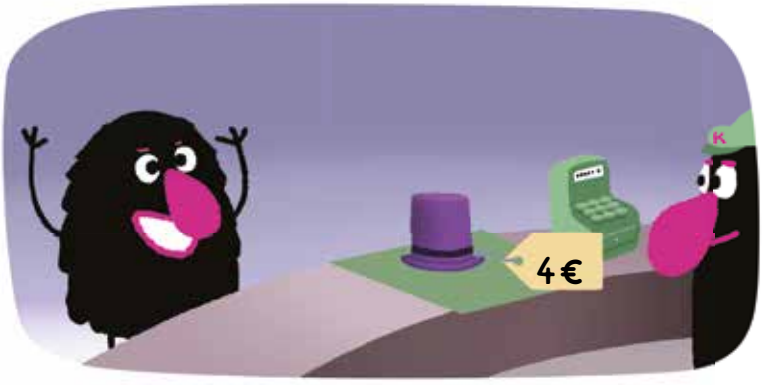
5 € = 1€+1€+1€+1€+1€



5 € = 2€+2€+1€

7.3 O-mai-suu-den ar-vo 1–10 €

A **Täy-den-nä** tyh-jät koh-dat.

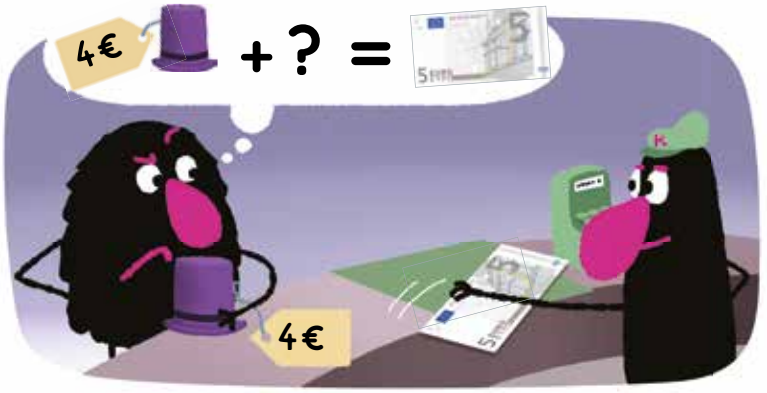


Kuin-ka pal-jon hat-tu mak-saa?

 = 4 €

Kuin-ka pal-jon ne-nu-kil-la on ra-haa?

 = 5 €

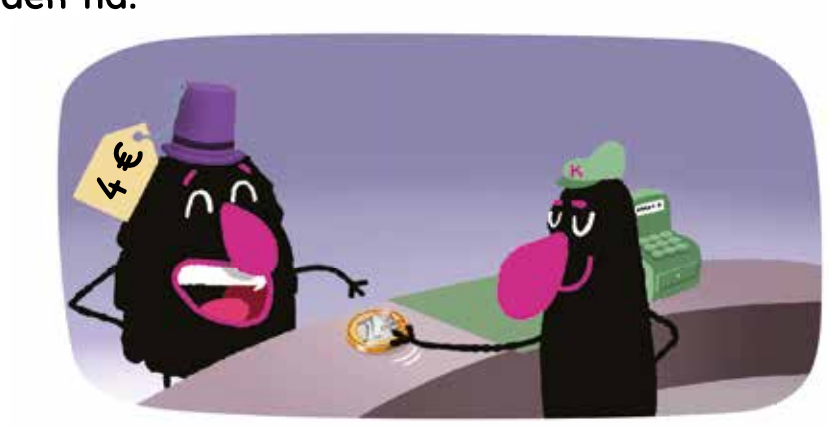


Mi-tä ne-nuk-ki miet-tii? Mik-si hän ei o-le tyy-ty-väi-nen?

Sovelluksen koodi

A B Harjoittelemme matikkatarinan avulla vaihtorahan ja omaisuuden arvon ymmärtämistä. Matikkakeskustelu käydään aikuisen johdattelemana.

B Täy-den-nä.



Mik-si ne-nuk-ki on tyy-ty-väi-nen?

+ 1 € =

C **Mer-kit-se** lu-vut ja las-ke.

+ 3 € =

+ 0 € =

+ 2 € =

+ 1 € =

+ 5 € =

+ 1 € =

7.4 Har-joi-tel-laan

A **Las-ke.** Kuin-ka pal-jon ra-haa on yh-teen-sä?

6 €

9 €

B **Las-ke.** Kuin-ka pal-jon ra-haa on yh-teen-sä?

= 3 €

= 5 €

= 6 €

= 7 €

= 8 €

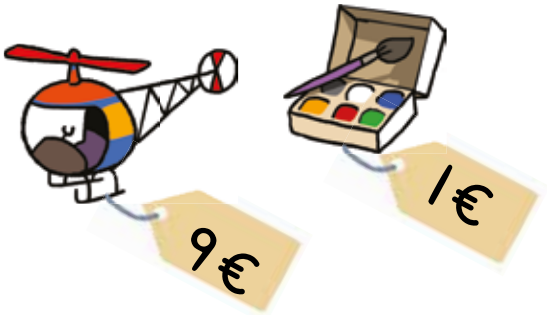
Sovelluksen koodi

C **Las-ke.** Kuin-ka pal-jon os-tok-set mak-sa-vat yh-teen-sä?

Au-to ja pu-pu mak-sa-vat yh-teen-sä 7 € .

Lin-na ja kir-ja mak-sa-vat yh-teen-sä 8 € .

Nuk-ke ja pa-li-kat mak-sa-vat yh-teen-sä 8 € .



He-li-kop-te-ri ja ve-si-vä-rit mak-sa-vat yh-teen-sä 10 € .

D **Las-ke.** Kuin-ka pal-jon vaih-to-ra-ha ja os-tos o-vat yh-teen-sä?

= 6 €

= 9 €

= 7 €

= 10 €

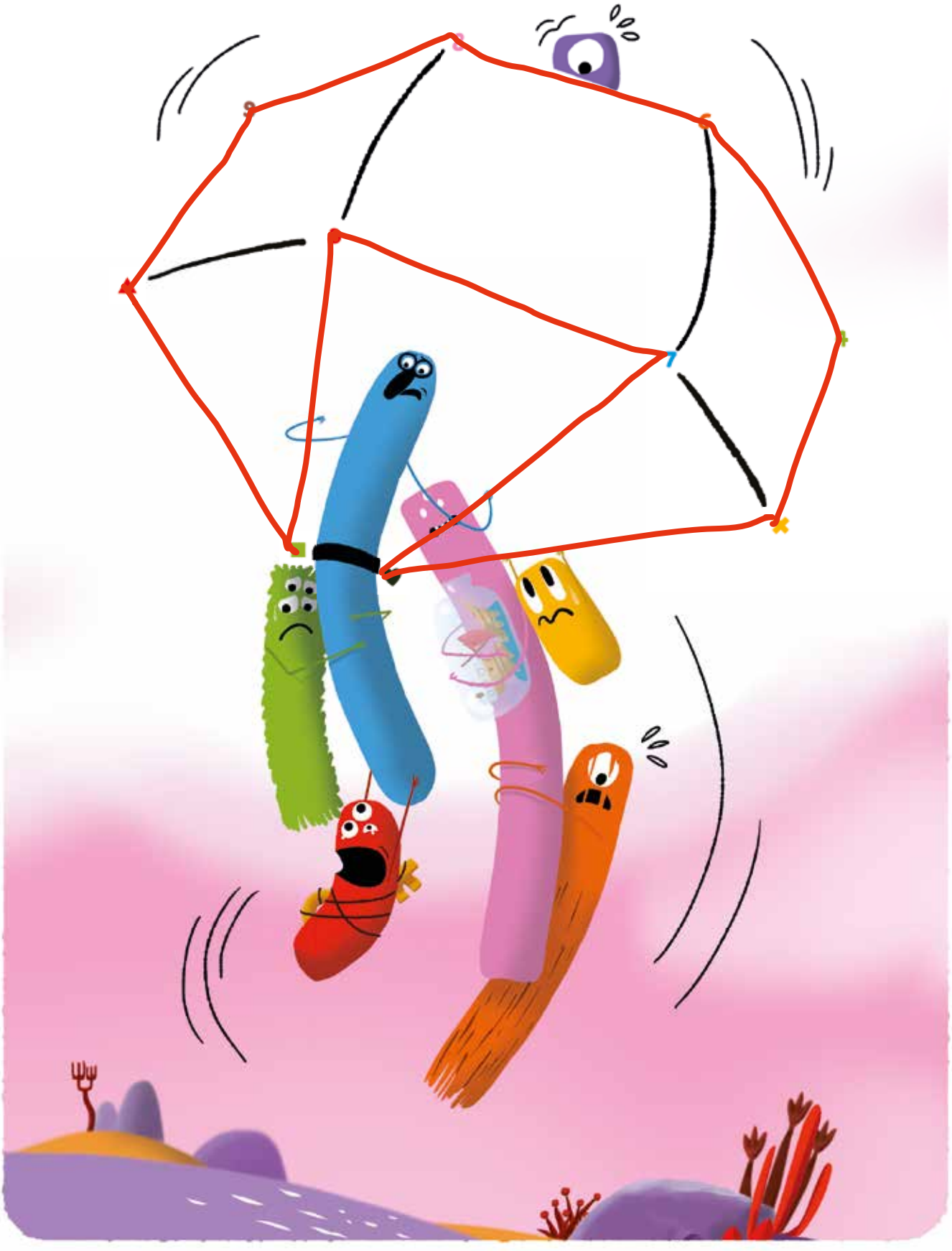
= 6 €

= 8 €

Jakso 8

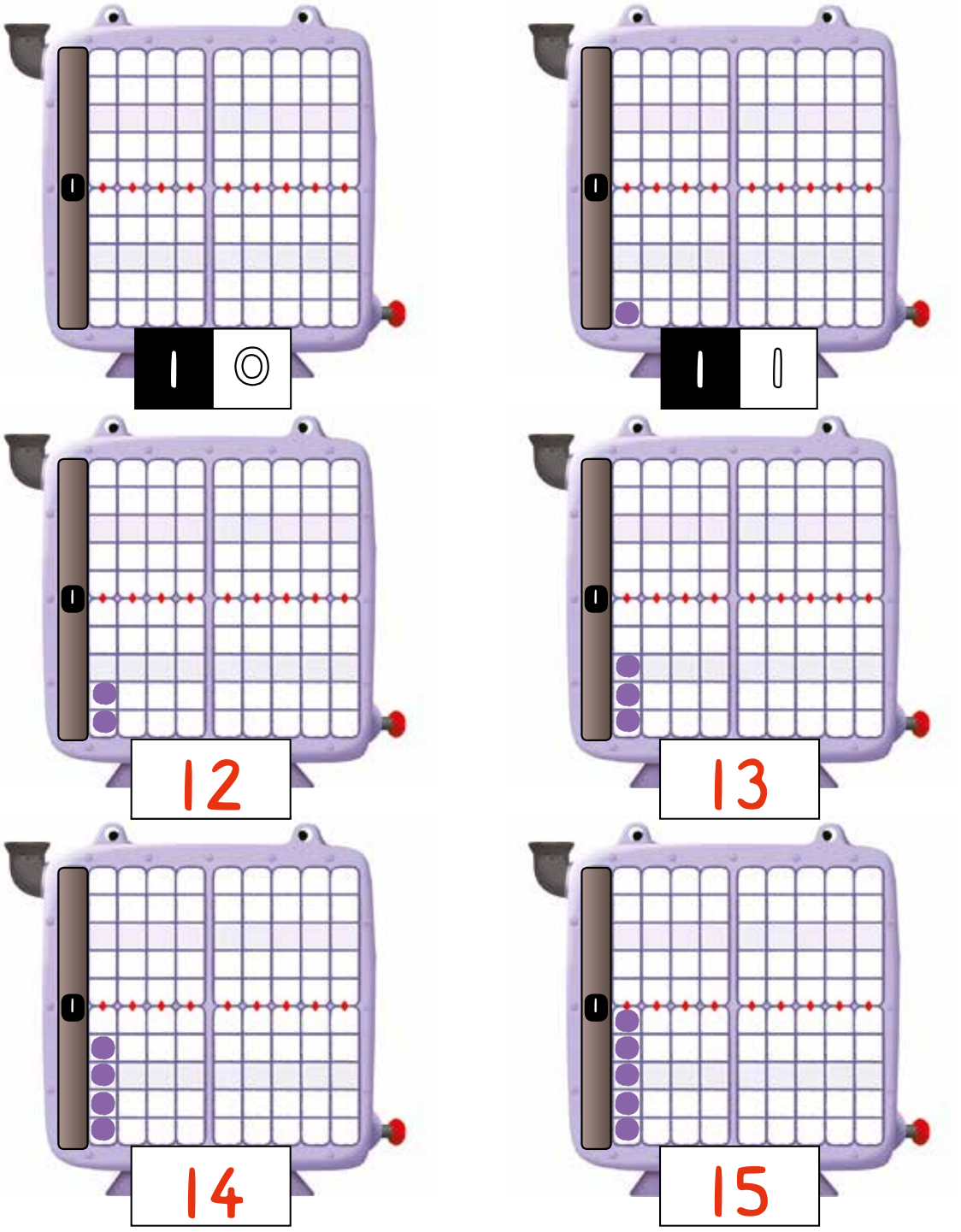
Luvut 10–21

- Laajennetaan lukualuetta 10–21
- Kymmenen voima ja lukusuora
- Lasketaan monin tavoin



8.1 Yk-kö-set ja kym-me-net: sa-ta-ko-ne

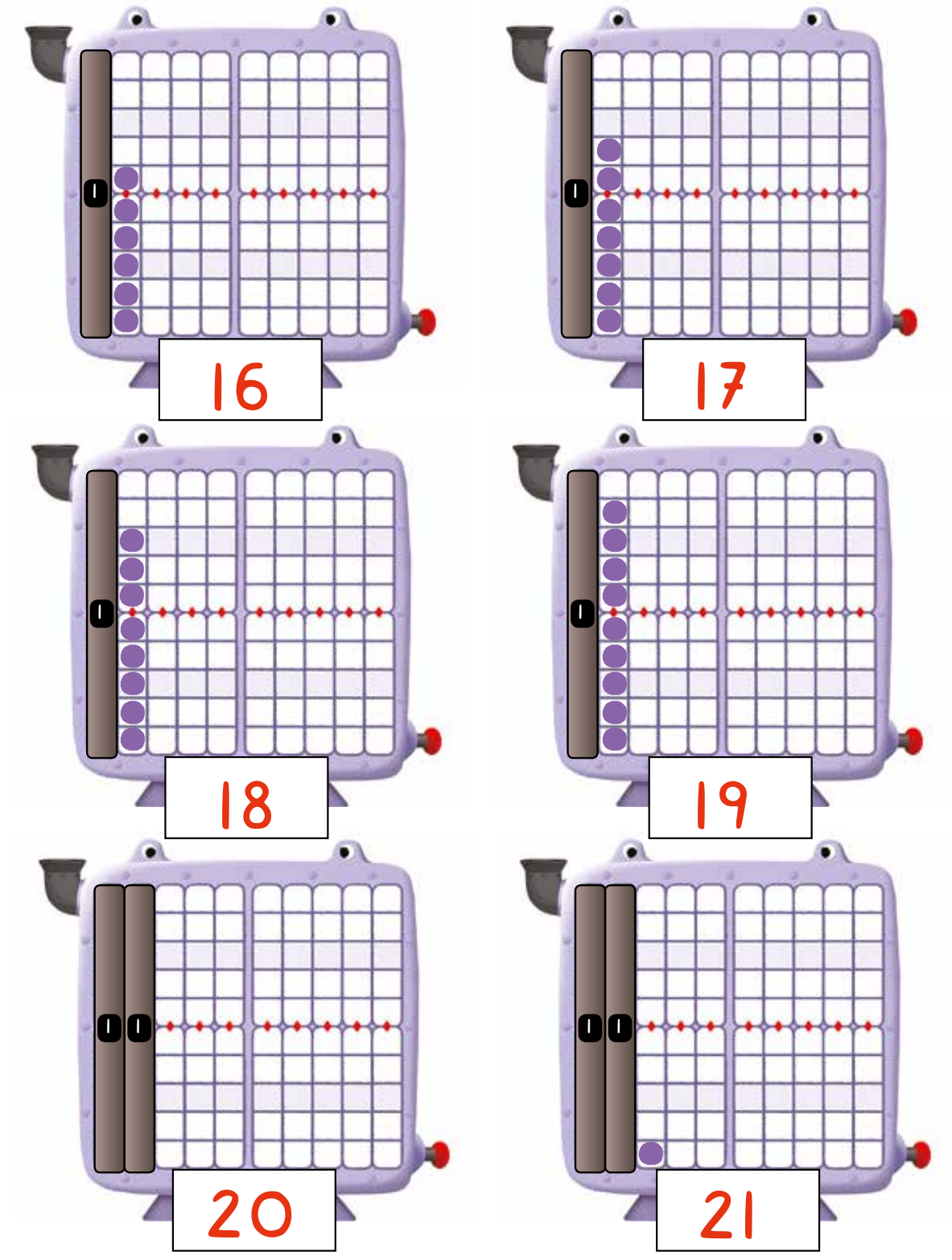
A **Tut-ki.** Mer-kit-se lu-ku ko-nee-seen.



Sovelluksen koodi

A Sovelluksen satakoneen avulla havainnollistetaan ykkösiä ja kymmeniä. Satakone muodostuu kymmenestä ykköstuubista.

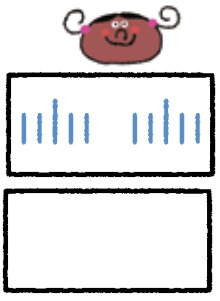
B **Tut-ki.** Mer-kit-se lu-ku ko-nee-seen.

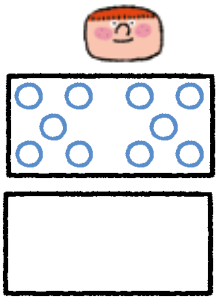


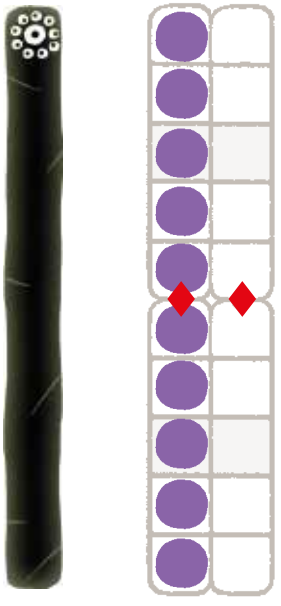
8.2 Lu-vut 10–21

A **Täy-den-nä** yk-kö-set, sor-met ja no-pat.

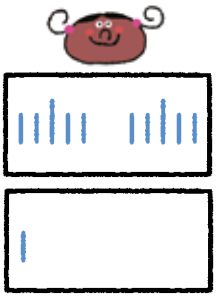
10+0 = 10

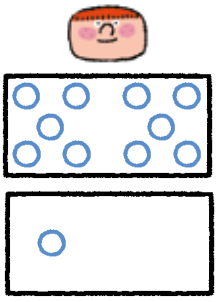


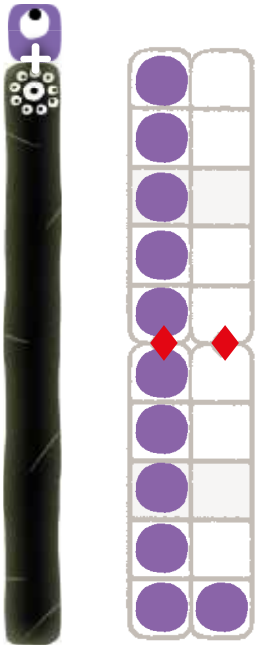




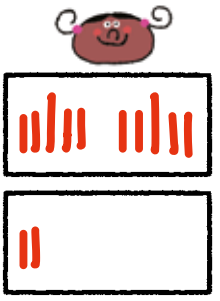
10+1 = 11

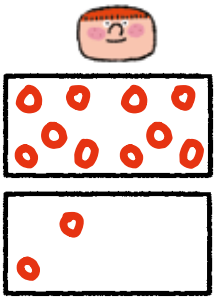


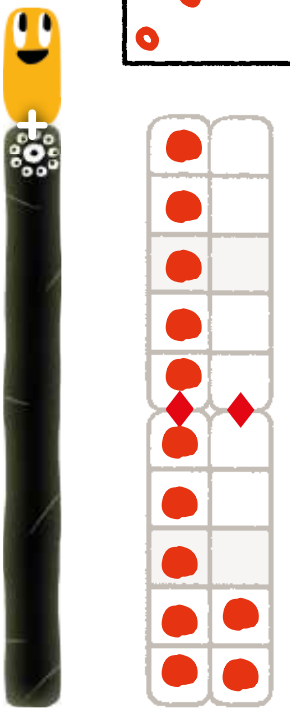




10+2 = 12





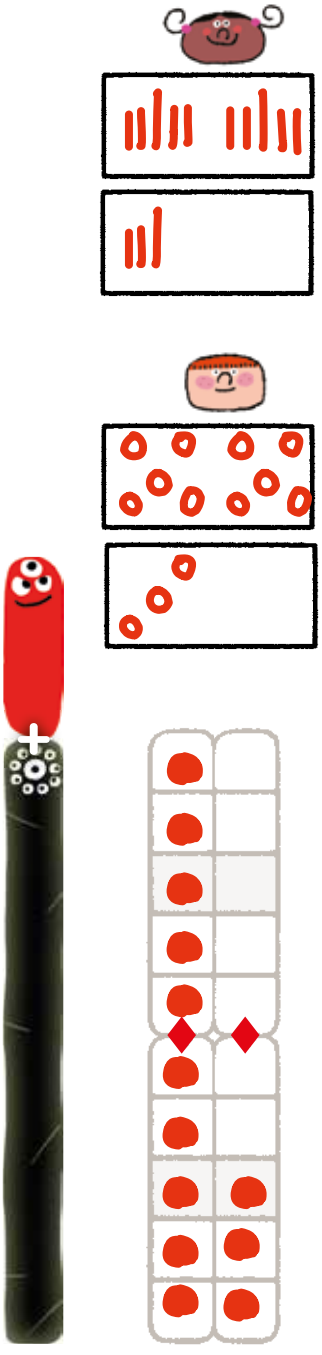


Sovelluksen koodi

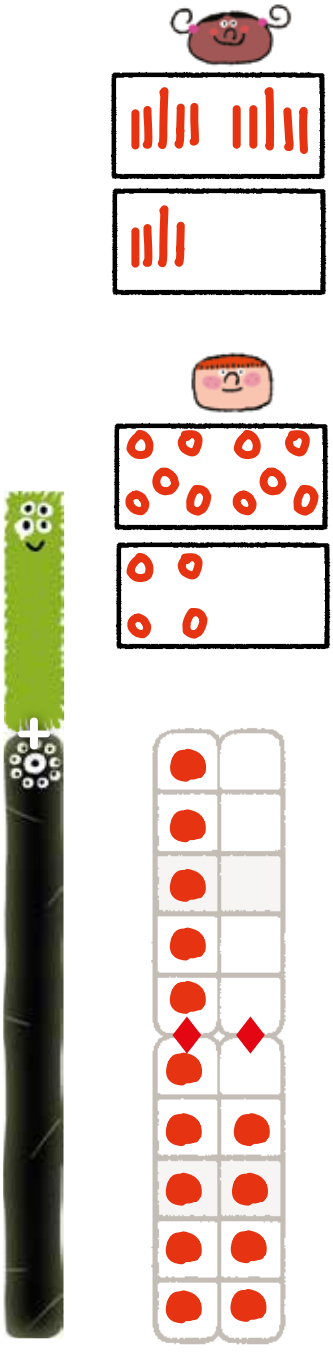
AB Merkitsemme luvun kymmenet ja ykköset mustavalkoisten korttien avulla havainnollistaaksemme kymmenjärjestelmän rakennetta.

B **Täy-den-nä** yk-kö-set, sor-met ja no-pat.

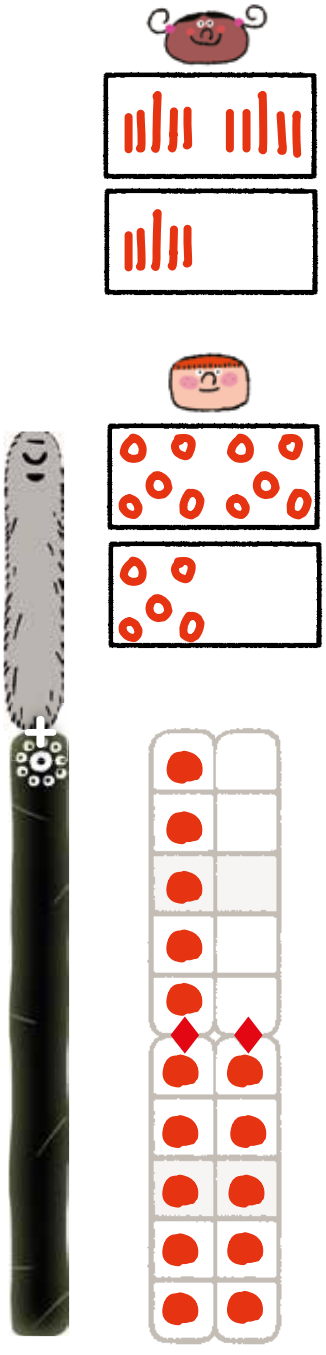
10+3 = 1 3



10+4 = 1 4

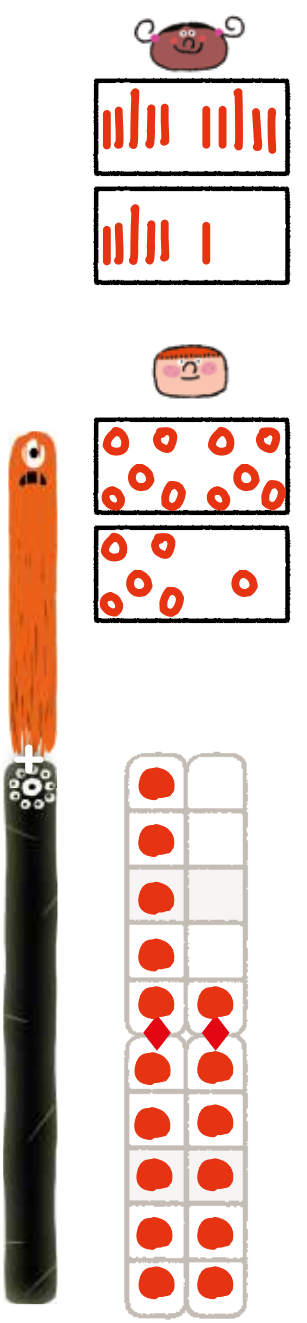


10+5 = 1 5

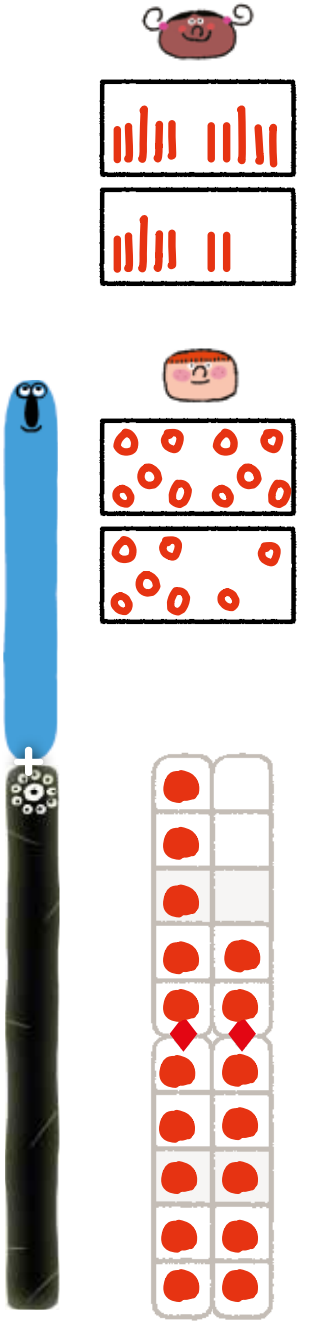


C **Täy-den-nä** yk-kö-set, sor-met ja no-pat.

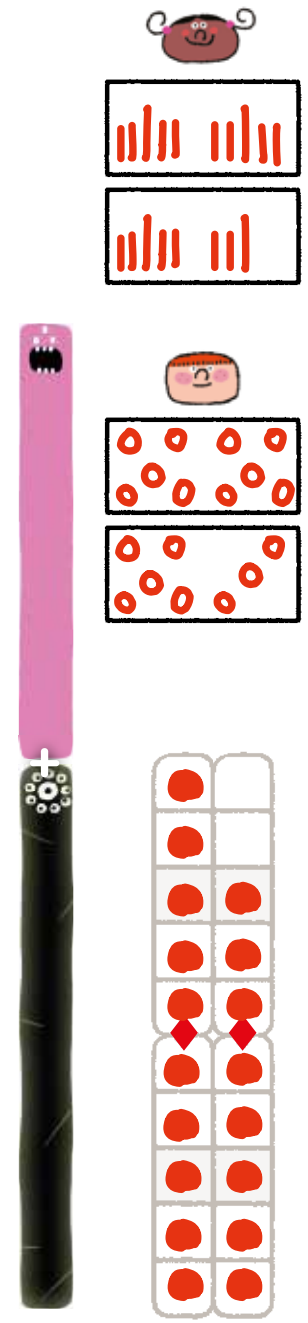
10+6 = 1 6



10+7 = 1 7



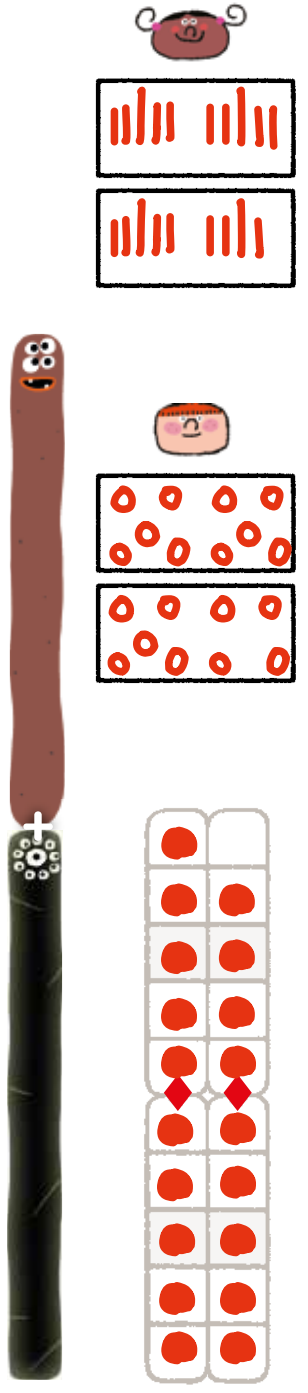
10+8 = 1 8



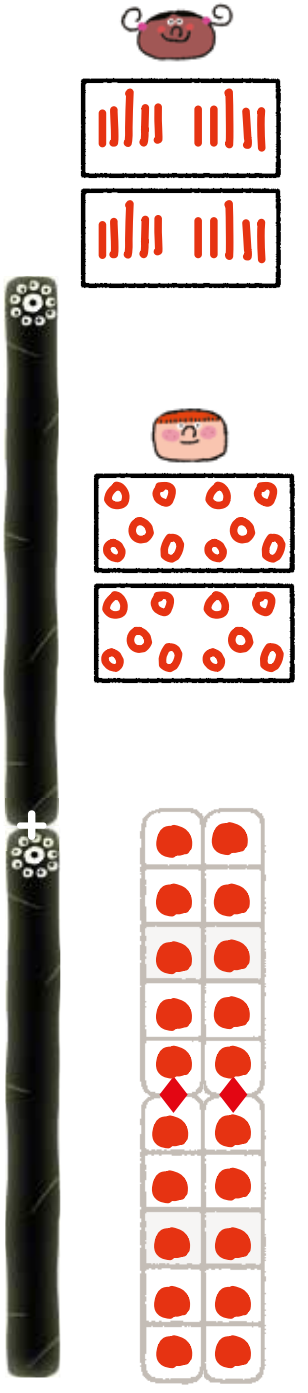
Sovelluksen koodi

D **Täy-den-nä** yk-kö-set, sor-met ja no-pat.

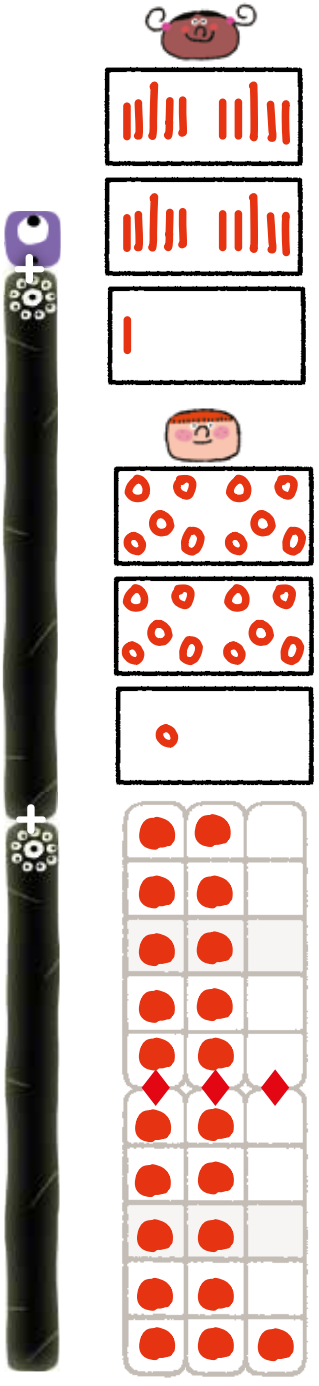
10+9 = 19



20+0 = 20

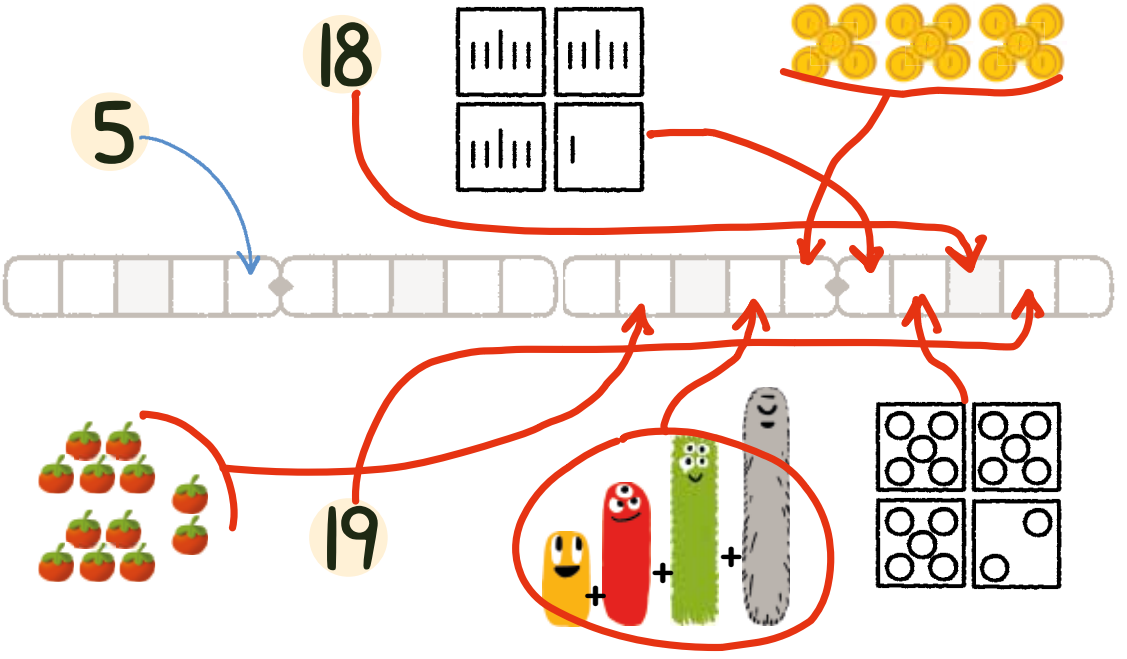


20+1 = 21



8.3 Lu-ku-jo-no-tai-dot

A Yh-dis-tä määrä-suoral-le.



B Täy-den-nä lu-vut ja las-ke.

Tehtävän laskut voi muodostaa monin eri tavoin.

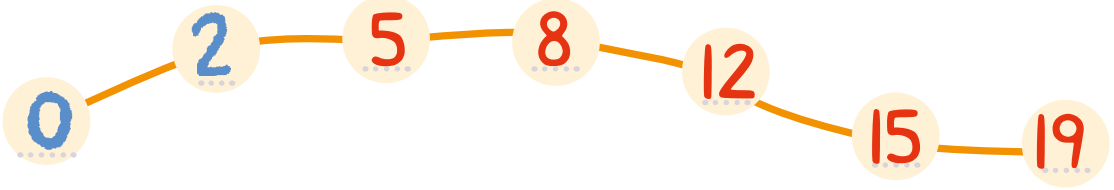
10+4 = 14	15 = 10 + 5	20 = 10 + 10
10+7 = 17	12 = 10 + 2	14 = 10 + 4
10+1 = 11	19 = 10 + 9	15 = 10 + 5
9+10 = 19	10 = 10 + 0	16 = 10 + 6
10+0 = 10	18 = 10 + 8	17 = 10 + 7
5+10 = 11	11 = 10 + 1	13 = 10 + 3

Sovelluksen koodi

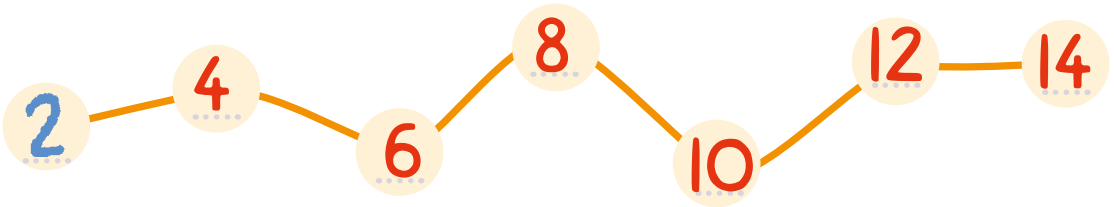
A C D Lukujonotaidot ovat tärkeä osa peruslaskutaidon oppimista. On tärkeää harjoitella lukujen asettamista suuruusjärjestykseen, lukujonojen luettelemista eteen- ja taaksepäin ja lukujonon jatkamista annetusta luvusta.

C **Mer-kit-se** lu-vut suu-ruus-jär-jes-tyk-ses-sä.

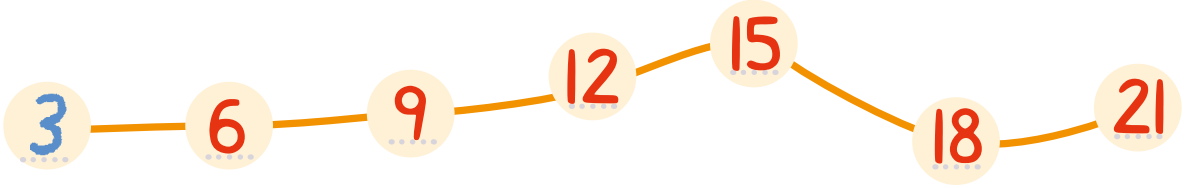
19 5 12 8 15 ~~2~~ ~~0~~



~~2~~ 14 8 12 10 6 4



15 6 18 12 9 21 ~~3~~

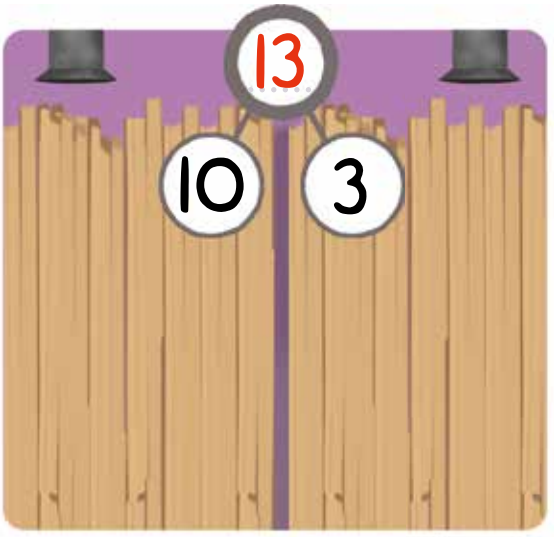


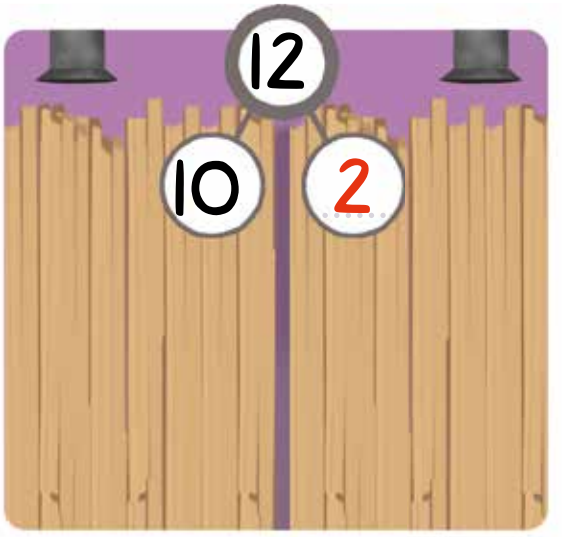
D **Mer-kit-se** =, < tai >.

14 [>] 13	13+1 [<] 15	20 [=] 10+10
10+3 [<] 15	12+1 [=] 13	12 [=] 2+10
10+4 [>] 3+10	12 [=] 11+1	5+5 [=] 10
17+1 [>] 17	9+10 [=] 10+9	5+5 [<] 11

8.4 Kym-me-nen voi-ma

A **Mer-kit-se** lu-vut ja las-ku. Las-ke.

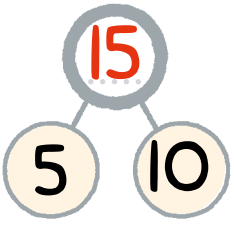




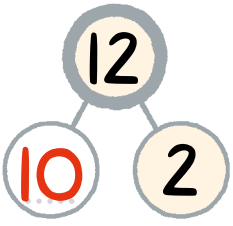
10 + 3 = 13

12 − 10 = 2

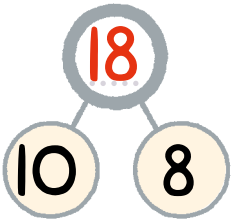
B **Mer-kit-se** lu-vut ja muo-dos-ta las-ku. Las-ke.



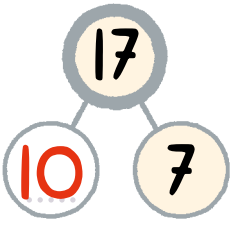
5 + 10 = 15



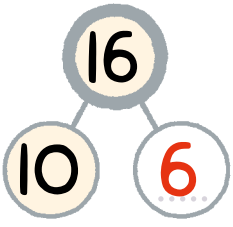
12 − 2 = 10



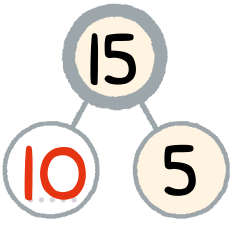
10 + 8 = 18



17 − 7 = 10



16 − 10 = 6



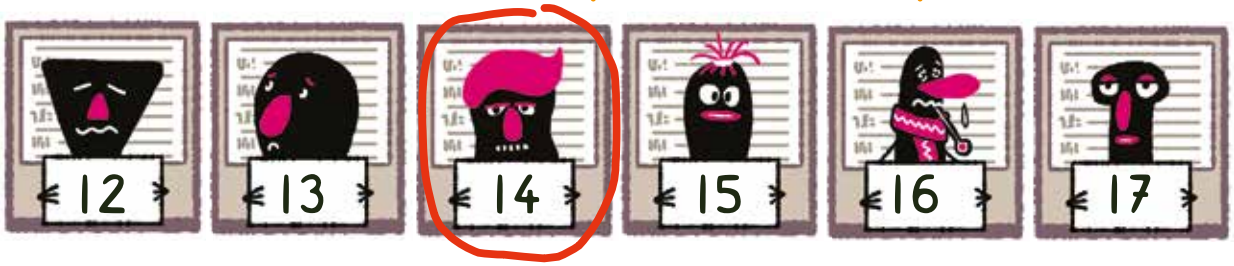
15 − 5 = 10

Sovelluksen koodi

C

Las-ke. Lu-ku, jo-ka ei o-le tu-los-ten jou-kos-sa, o-soit-taa syyl-li-sen.

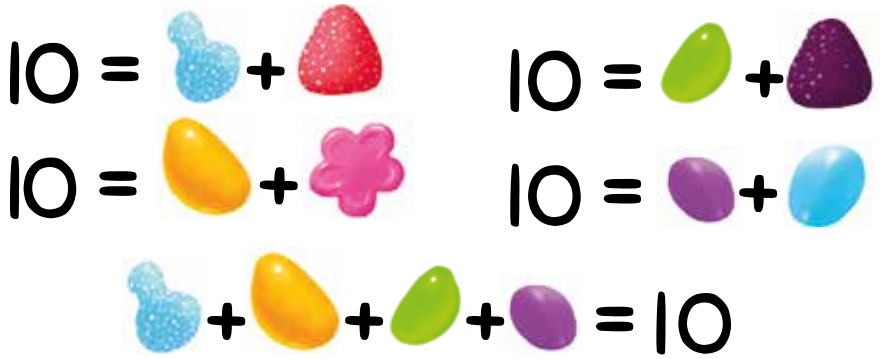
11+1 = 12	10+2 = 12	17−2 = 15
12+1 = 13	13−1 = 12	14+2 = 16
10+7 = 17	10+2 = 12	19−7 = 12
17−1 = 16	10+6 = 16	16−1 = 15
14+1 = 15	18−1 = 17	15+1 = 16



D

Päät-te-le, mi-kä lu-ku so-pii ku-van pai-kal-le.

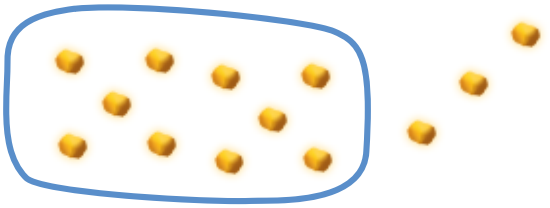
Pulmapalat



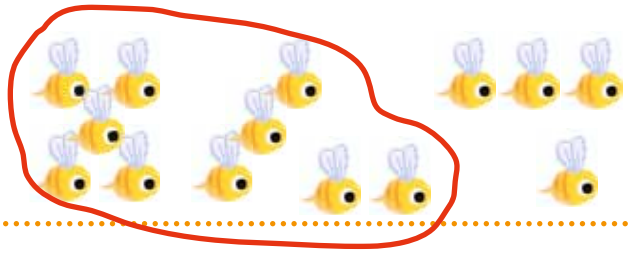
Tehtävässä on myös muita vastauksia.

8.5 Ryh-mi-tel-lään kym-me-nik-si

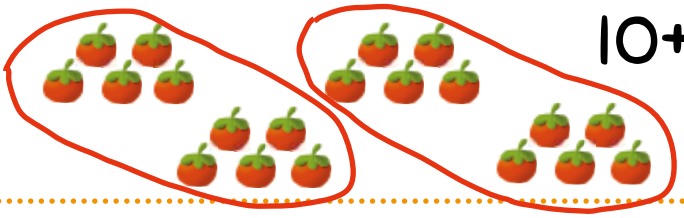
A **Ym-py-röi** 10. Tee las-ku ja las-ke.



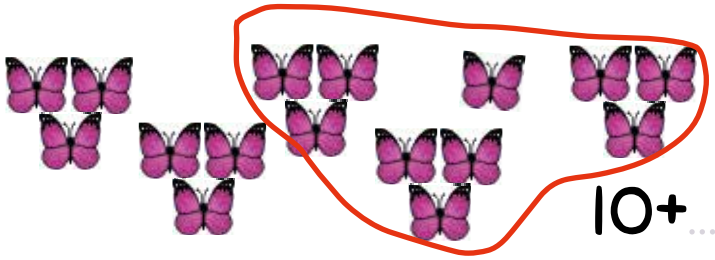
10 + 3 = 13



10 + 4 = 14

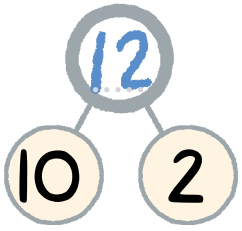


10 + 10 = 20

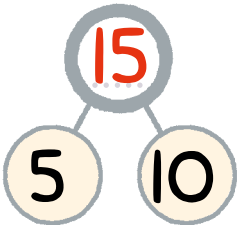


10 + 6 = 20

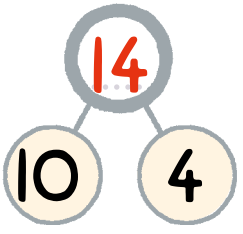
B **Mer-kit-se** lu-vut ja muo-dos-ta las-ku. Las-ke.



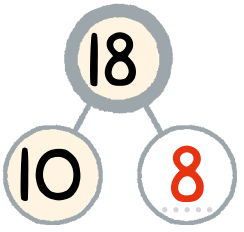
10 + 2 = 12



5 + 10 = 15



10 + 4 = 14

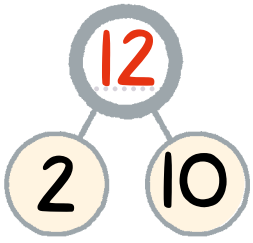


18 − 10 = 8

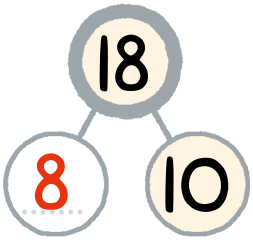
Sovelluksen koodi

A Kymmeniksi ryhmittely on tärkeä osa kymmenjärjestelmän ymmärtämistä.

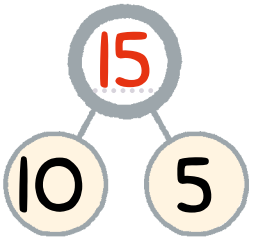
C **Mer-kit-se** lu-vut ja muo-dos-ta las-ku. Las-ke.



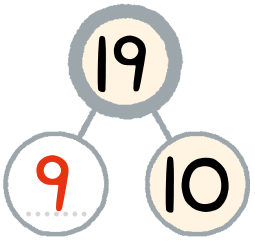
2+10=12



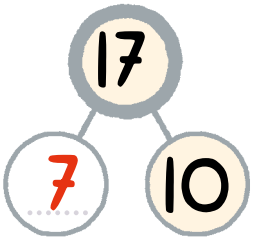
18−10=8



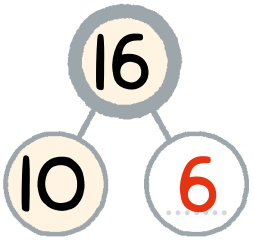
10+5=15



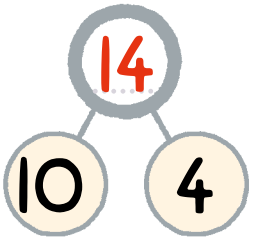
19−10=9



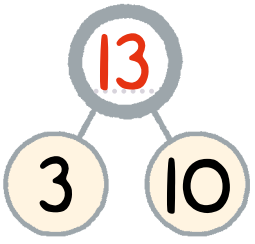
17−10=7



16−10=6



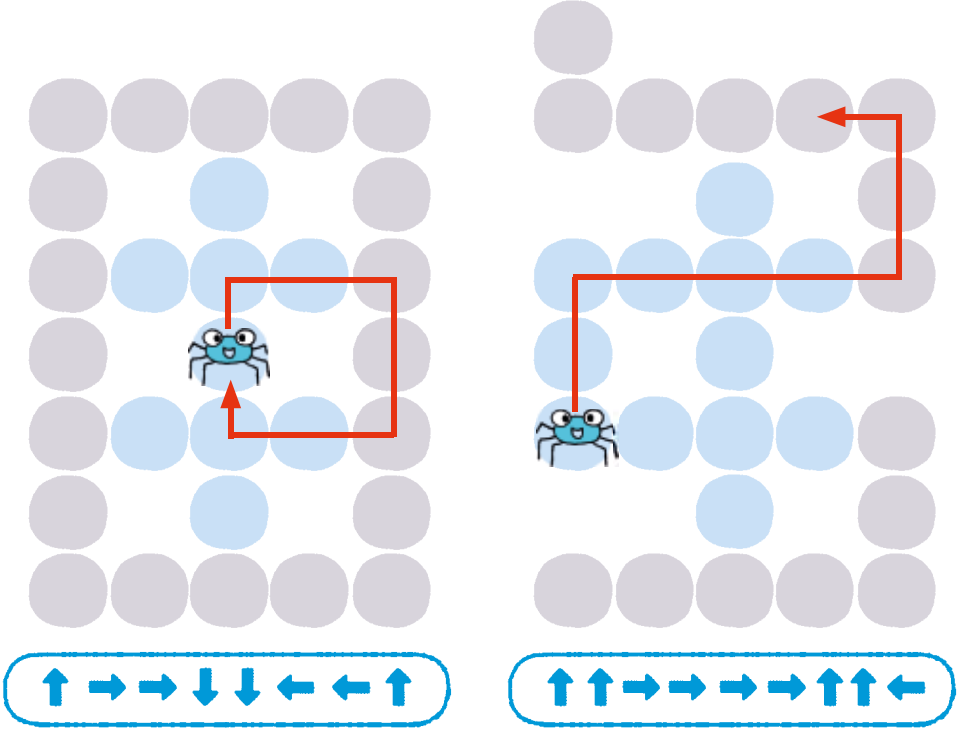
10+4=14



3+10=13

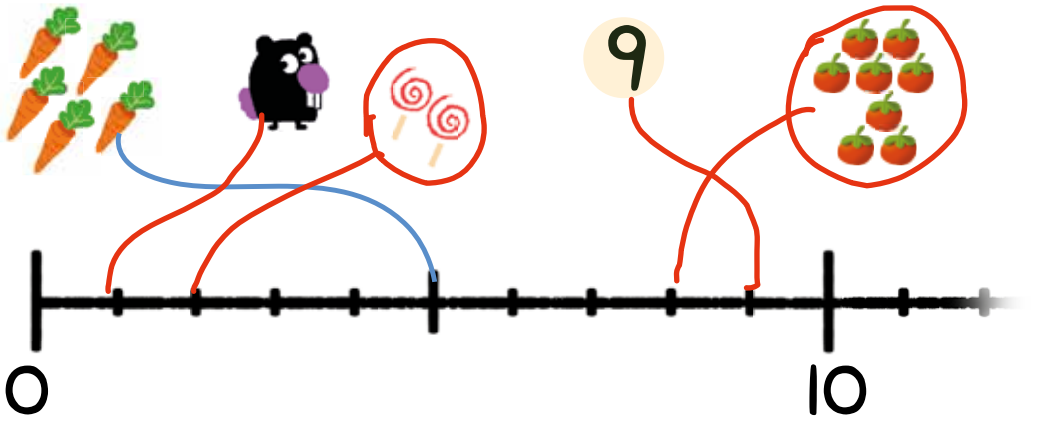
D **Oh-jaa** hä-mä-häk-ki oh-jeen mu-kaan. Piir-rä.

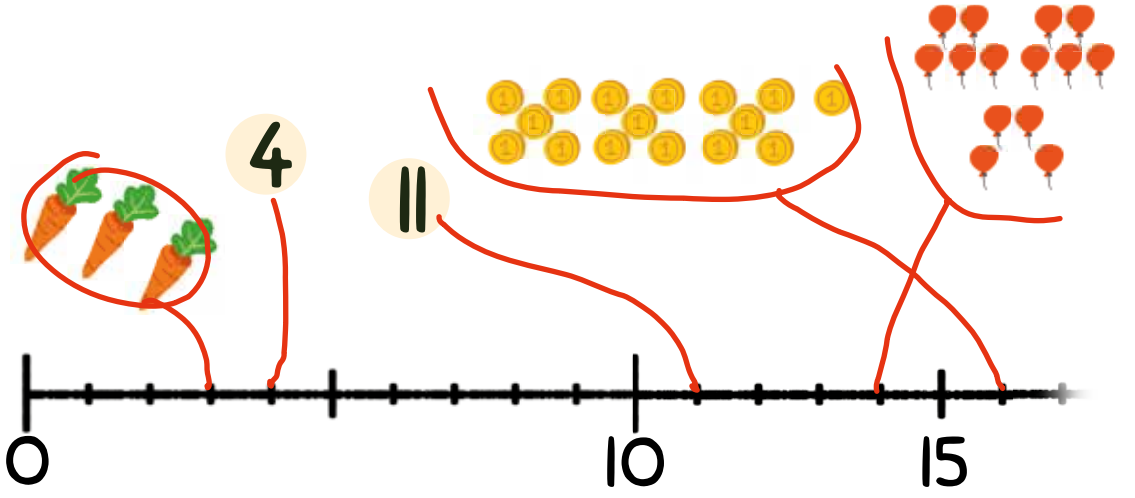
Pulmapalat

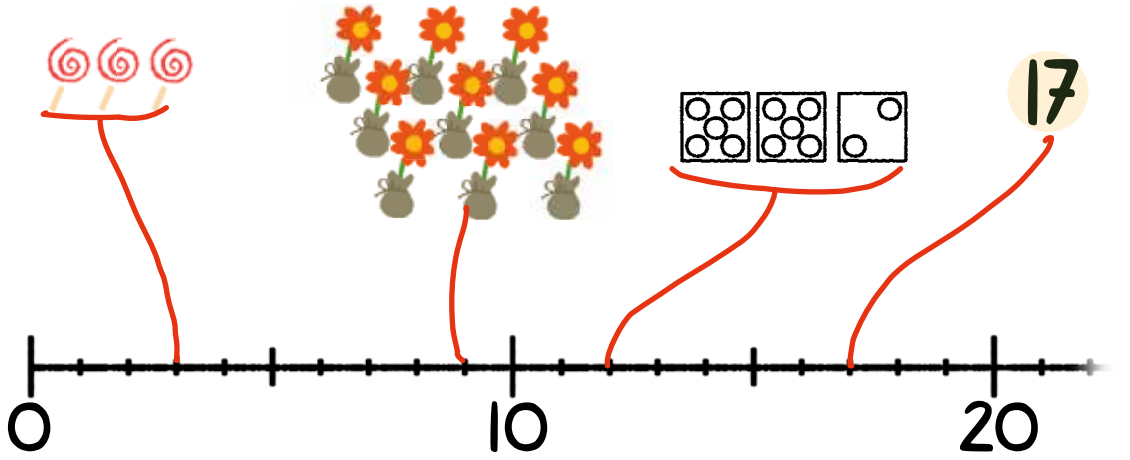


8.6 Lu-ku-suo-ra

A **Yh-dis-tä** lu-ku-suo-raan.

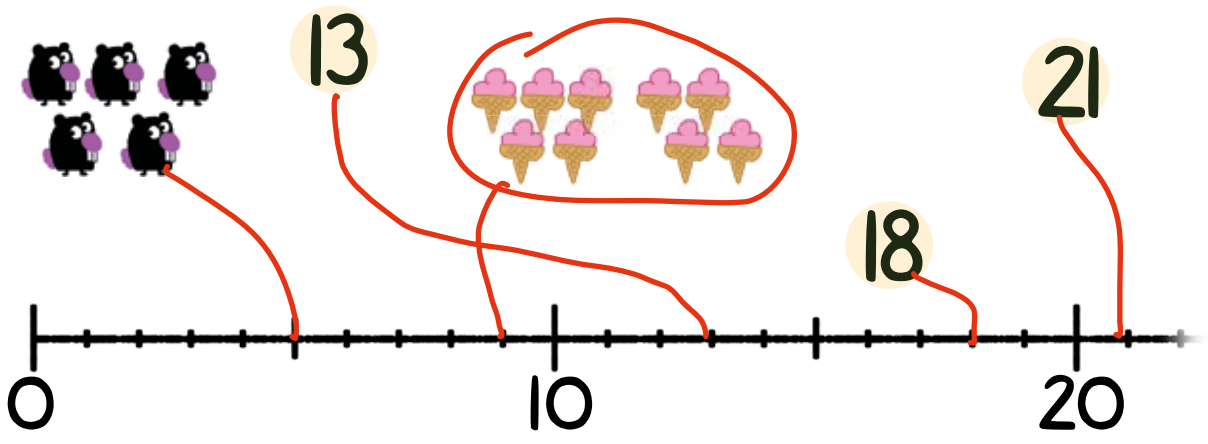


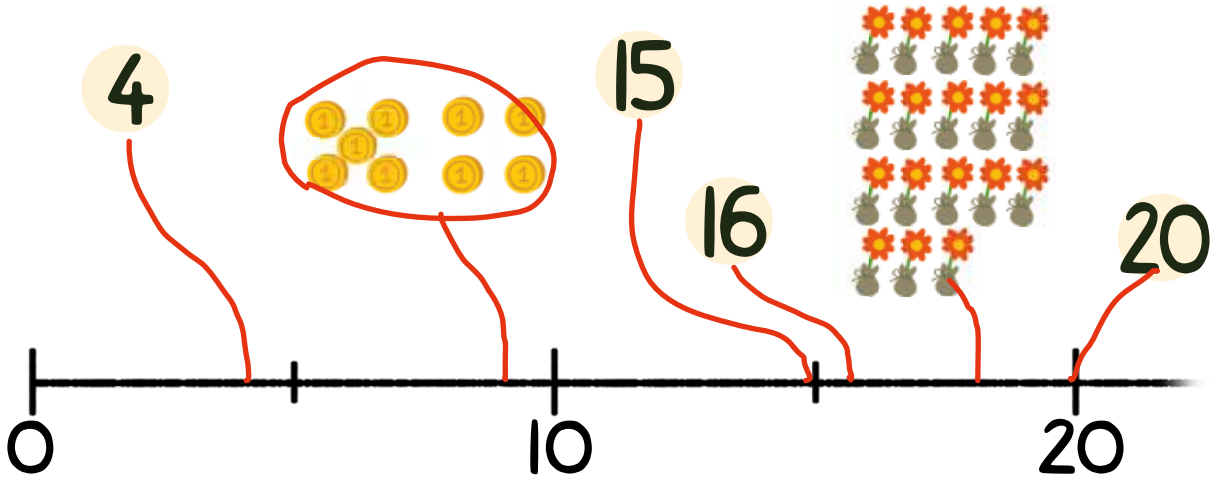


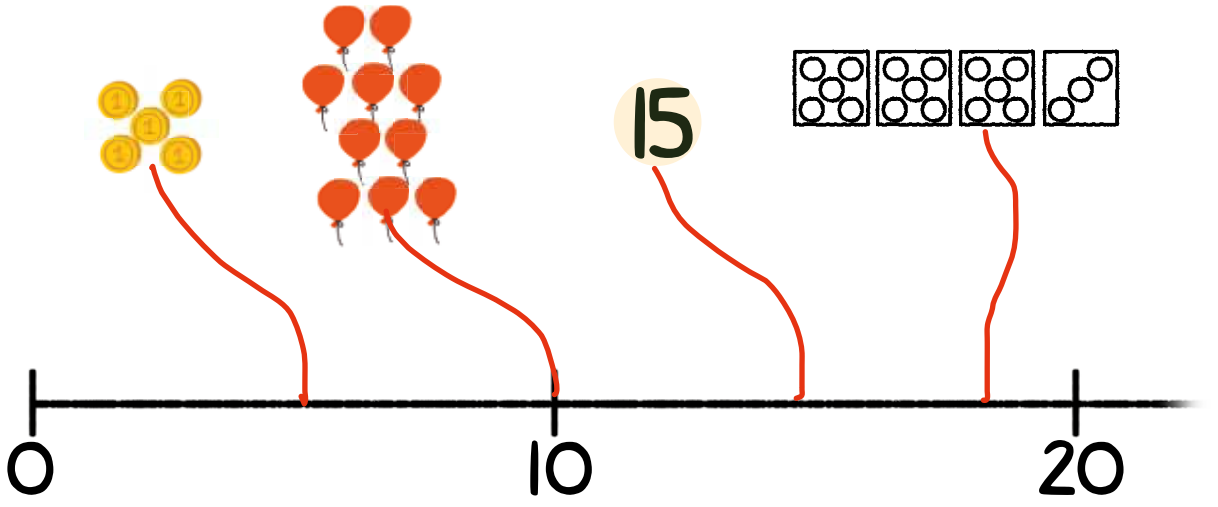


Sovelluksen koodi

B **Yh-dis-tä** lu-ku-suo-raan.

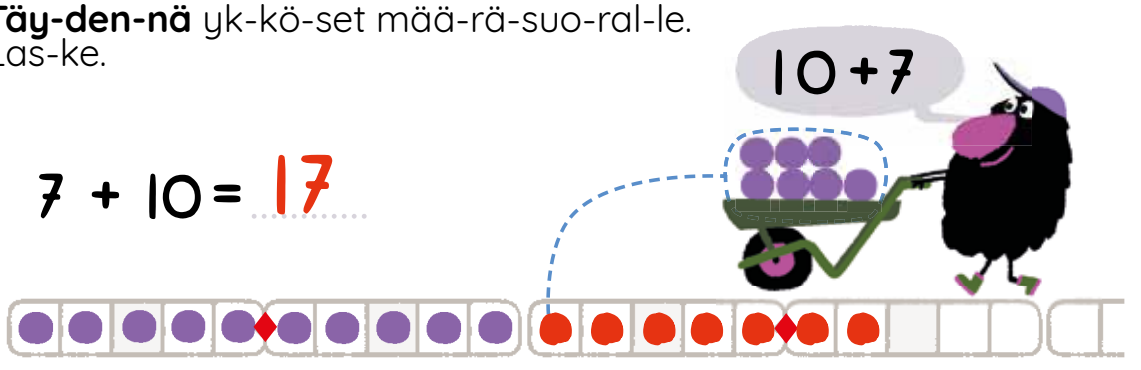




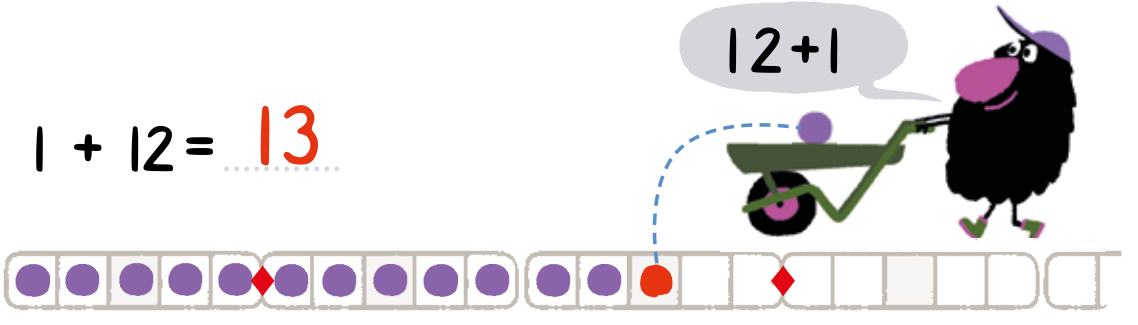


8.7 Las-ke-taan mää-rä-suo-ral-la

A **Täy-den-nä** yk-kö-set mää-rä-suo-ral-le.
Las-ke.

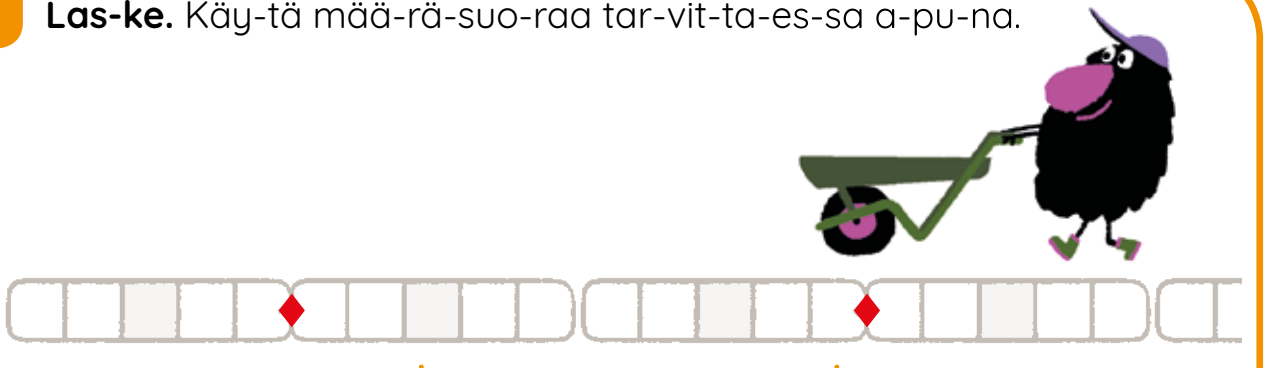


7 + 10 = 17



1 + 12 = 13

B **Las-ke.** Käy-tä mää-rä-suo-raa tar-vit-ta-es-sa a-pu-na.



1 + 17 = 17	15 + 0 = 15	1 + 11 = 12
8 + 10 = 18	1 + 13 = 14	19 + 1 = 20
10 + 4 = 14	9 + 10 = 19	2 + 10 = 12

Sovelluksen koodi

A Yhteenlasku on vaihdannainen laskutoimitus. Yhteenlaskettavien järjestystä voidaan siis vaihtaa ja tulos säilyy samana. Tavoitteena on tutkia tätä yhteenlaskun ominaisuutta.

C

Vä-hen-nä mää-rä-suo-ral-ta. Las-ke.

17 − 1 = 16

17 − 16 = 1

D

Las-ke. Käy-tä mää-rä-suo-raa tar-vit-ta-es-sa a-pu-na.

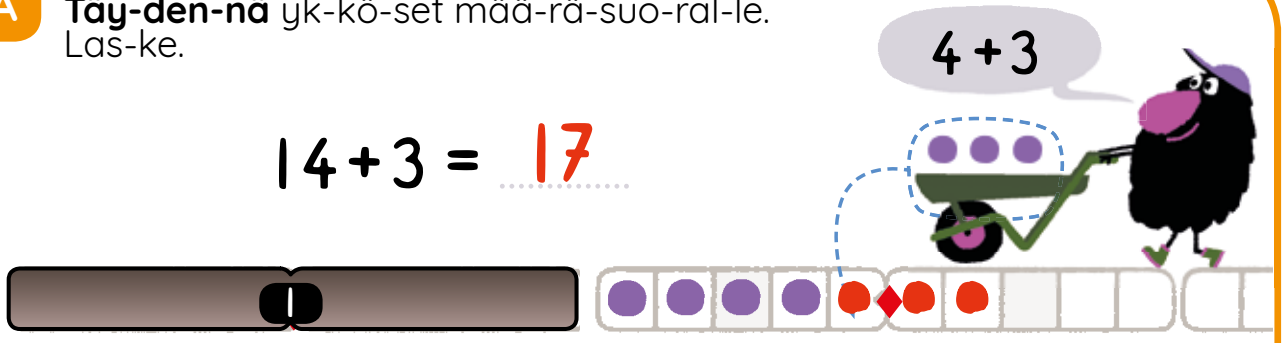
12 − 2 = 10	15 − 1 = 14	16 − 10 = 6
12 − 10 = 2	15 − 14 = 1	16 − 6 = 10
18 − 8 = 10	13 − 10 = 3	19 − 18 = 1

C Harjoittelemme vähennyslaskustrategioita määräsuoran avulla. Vähentäminen voidaan tehdä määräsuoran alku- tai loppuosasta. Pienet luvut kannattaa vähentää lopusta ja suuret alusta.

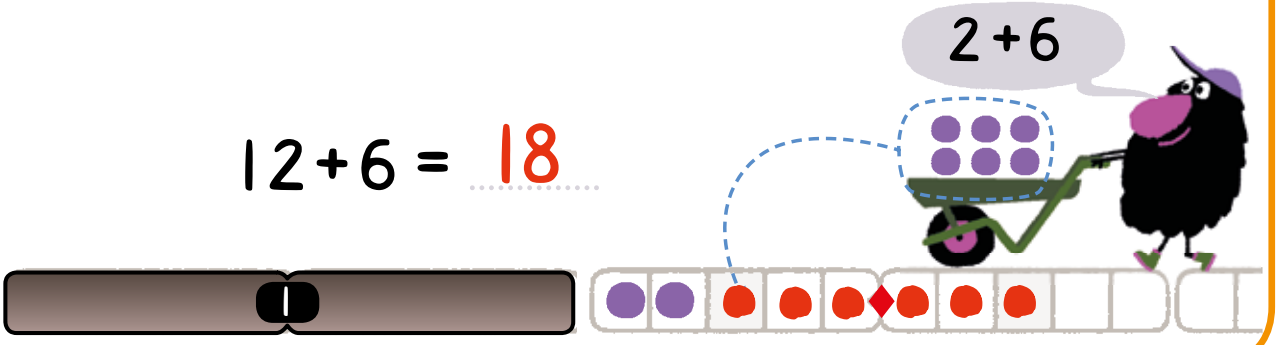
8.8 Las-ke-taan e-ri ta-voin

A **Täy-den-nä** yk-kö-set mää-rä-suo-ral-le.
Las-ke.

14+3 = 17



12+6 = 18



B Las-ke.

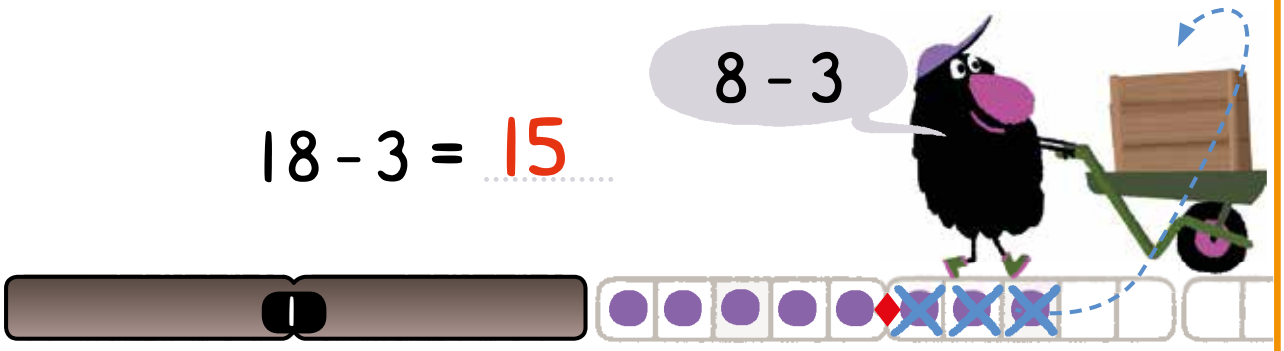
5+3 = 8	2+7 = 9	3+3 = 6
15+3 = 18	12+7 = 19	13+3 = 16
12+5 = 17	14+4 = 18	10+6 = 16
15+4 = 19	18+2 = 20	11+8 = 19
18+1 = 19	13+5 = 18	14+3 = 17

Sovelluksen koodi

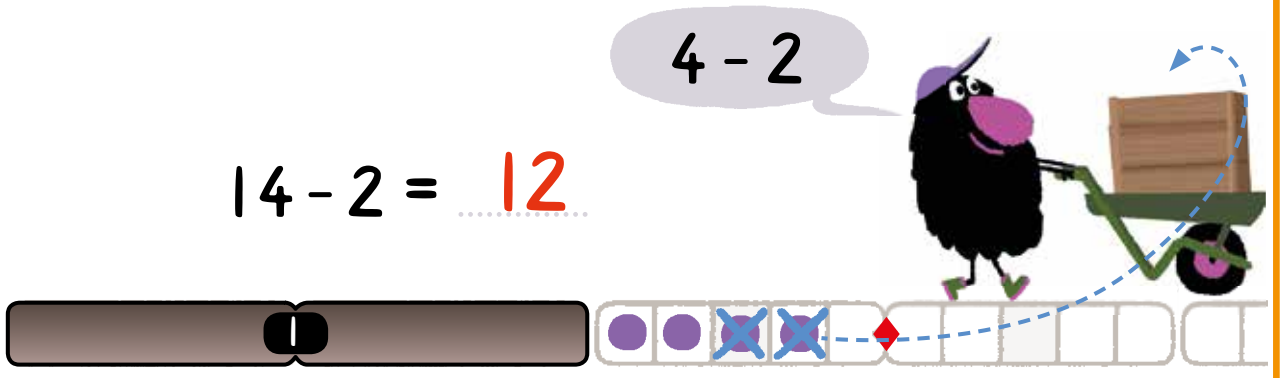
A Sovelluksessa täydet kymmenet voidaan lukita, jolloin voidaan linkittää tuttuja yhteenlaskuja lukualueen 0–20 laskuihin. Kiinnitetään huomiota esim. laskujen "5 + 3" ja "15 + 3" samankaltaisuuteen.

C Vä-hen-nä määrä-suo-ral-ta. Las-ke.

18 - 3 = 15



14 - 2 = 12



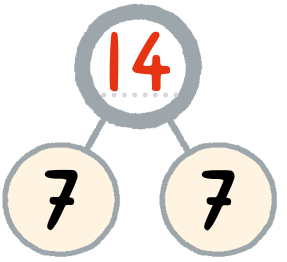
D Las-ke.

5 - 3 = 2	4 - 2 = 2	8 - 5 = 3
15 - 3 = 12	14 - 2 = 12	18 - 5 = 13
7 - 6 = 1	5 - 5 = 0	19 - 8 = 11
17 - 6 = 11	15 - 5 = 10	13 - 0 = 13
16 - 3 = 13	19 - 2 = 17	14 - 3 = 11

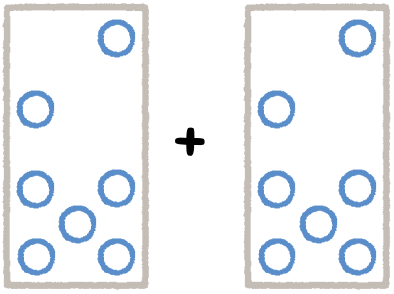
C Harjoittelemme vähennyslaskua ilman kymmenylitystä linkittämällä lukualueen 0–20 laskuja tuttuihin laskuihin. Kiinnitetään huomiota esim. laskujen “5 – 3” ja “15 – 3” samankaltaisuuteen.

8.9 Tup-lat ja ha-jo-tel-mat

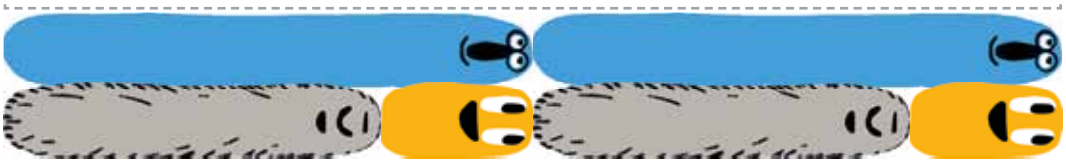
A Täy-den-nä.



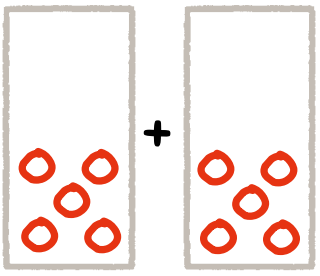
7 + 7 = 14



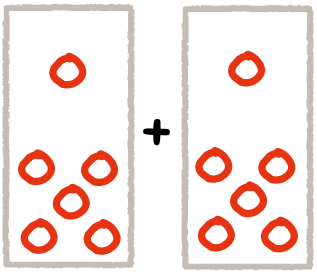
14



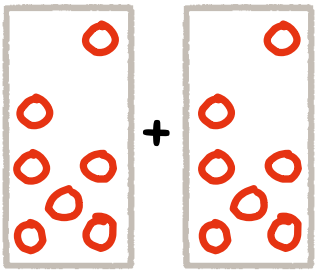
B **Piir-rä** no-pat ja mer-kit-se lu-vut. Las-ke.



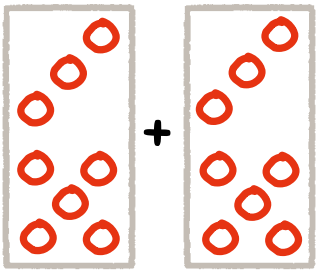
5 + 5 = 10



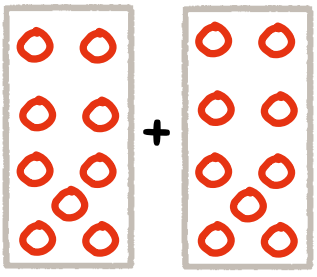
6 + 6 = 12



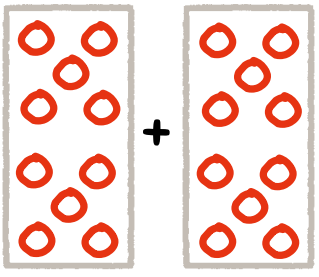
7 + 7 = 14



8 + 8 = 16



9 + 9 = 18



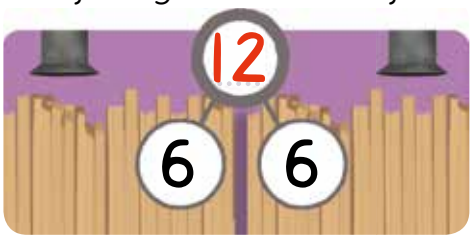
10 + 10 = 20

Sovelluksen koodi

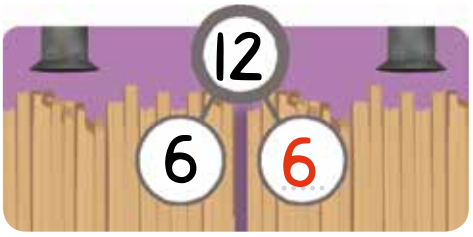
A B Tuplalaskut ovat ns. ankkurilaskuja, joiden avulla voidaan päätellä muita laskuja. Kun oppilas hallitsee laskun “7 + 7 = 14”, hän voi päätellä myös laskun “7 + 8” tuloksen.

C

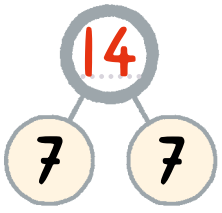
Las-ke ja täy-den-nä. Kir-joi-ta las-ku.



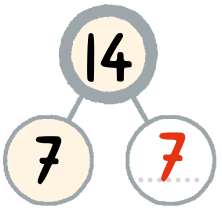
6+6 = 12



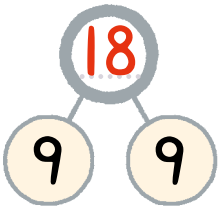
12−6 = 6



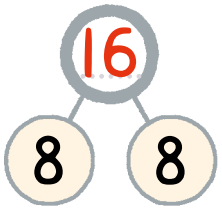
7+7 = 14



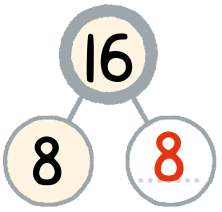
14−7 = 7



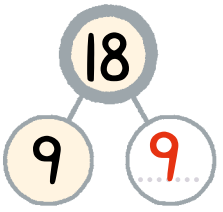
9+9 = 18



8+8 = 16



16−8 = 8



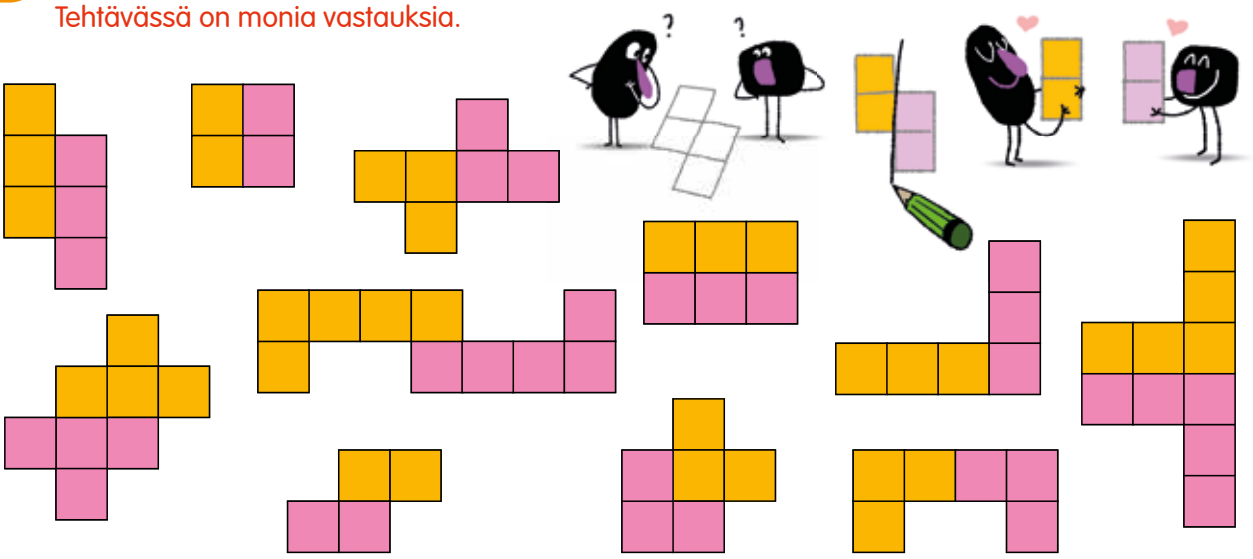
18−9 = 9

D

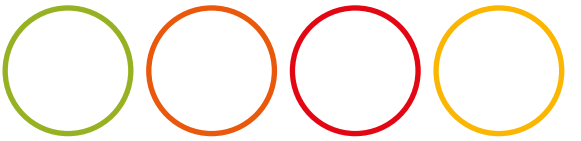
Jaa ku-vi-ot kah-teen sa-man-lai-seen o-saan.

Pulmapalat

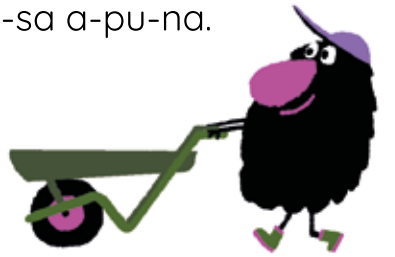
Tehtävässä on monia vastauksia.



8.10 Har-joi-tel-laan



A **Las-ke.** Käy-tä mää-rä-suo-raa tar-vit-ta-es-sa a-pu-na.



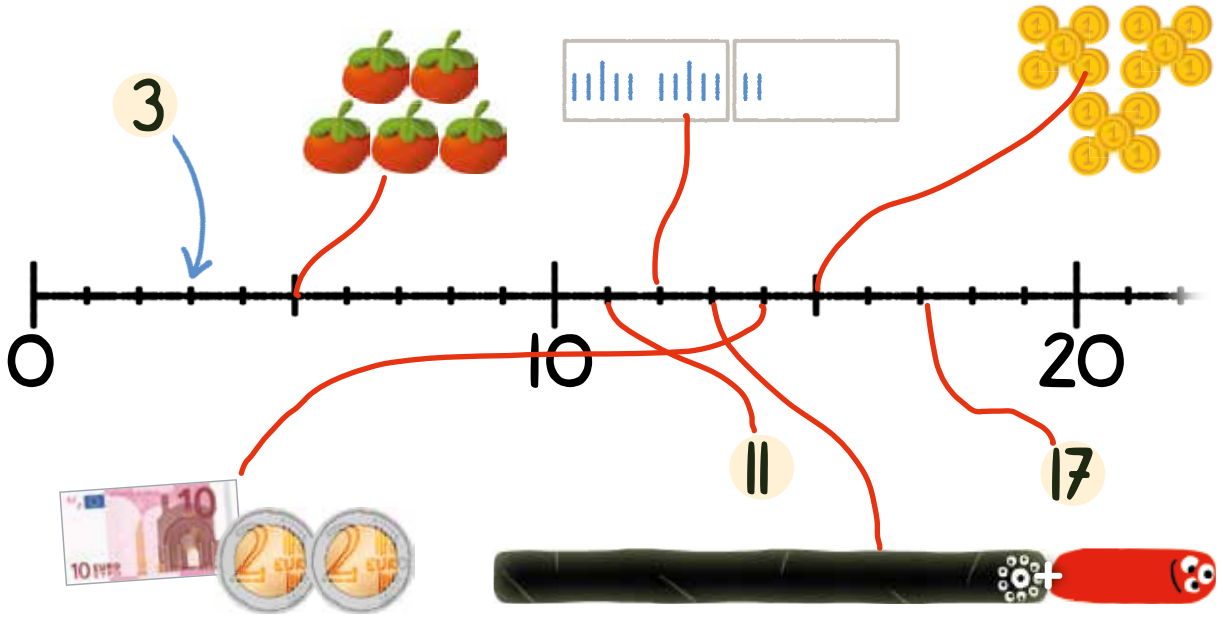
3 + 4 = 7	2 + 7 = 9	4 + 5 = 9
13 + 4 = 17	12 + 7 = 19	14 + 5 = 19
10 + 6 = 16	12 + 8 = 20	14 + 4 = 18

B **Las-ke.** Käy-tä mää-rä-suo-raa tar-vit-ta-es-sa a-pu-na.

8 − 4 = 4	6 − 5 = 1	7 − 5 = 2
18 − 4 = 14	16 − 5 = 11	17 − 5 = 12
18 − 14 = 4	16 − 15 = 1	17 − 15 = 2

Sovelluksen koodi

C **Yh-dis-tä** lu-ku-suo-raan.



D **Muo-dos-ta** laa-ti-koi-den lu-vuis-ta las-ku-ja, joi-den sum-maksi tu-lee 20.

Pulmapalat

Tehtävässä on monia vastauksia.

10 2

15 3 11

10+10=20

11+3+3+3=20

15+2+3=20

Jakso 9

Kymmenylitys

- Yhteenlasku kymmenylityksellä
- Vähennyslasku kymmenylityksellä
- Lasketaan euroilla


8

9.1 Kym-men-y-li-tys yh-teen-las-kus-sa

A **Mer-kit-se** las-ku ja las-ke. Kuin-ka mon-ta kul-ta-hip-pu-a on yh-teen-sä?

9 + 7 = 9 + 1 + 6

9 + 7 = 10 + 1

9 + 7 = 16

9+5 = 9 + 1 + 4

9+5 = 9 + 5

9+5 = 14

Sovelluksen koodi

A Kolmosen omistamat kultahiput näkyvät kuvassa vasemmalla BigNumbers-pelistä tutulla tavalla valkoisen kuvion sisältä. Kolmosen löytämät kultahiput tulee laskea kuvasta.

B **Täy-den-nä** yk-kö-set mää-rä-suo-ral-le. Las-ke.

8+4 = 8 + 2 + 2

8+4 = 8 + 4

8+4 = 12

7+5 = 7 + 3 + 2

7+5 = 7 + 5

7+5 = 12

8+3 = 8 + 2 + 1

8+3 = 8 + 3

8+3 = 11

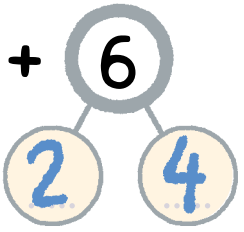
7+4 = 7 + 3 + 1

7+4 = 7 + 4

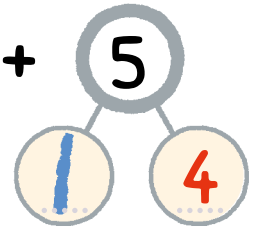
7+4 = 11

9.2 Har-joi-tel-laan kym-men-y-li-tys-tä

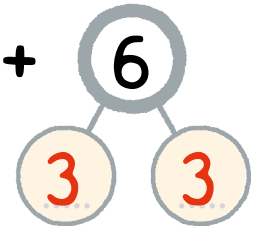
A **Las-ke.** Käy-tä a-pu-na ym-py-rä-mal-li-a.



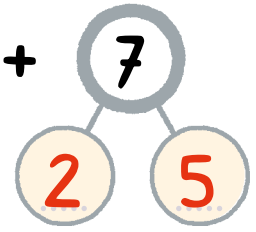
8 + 6 = 8 + 2 + 4 = 14



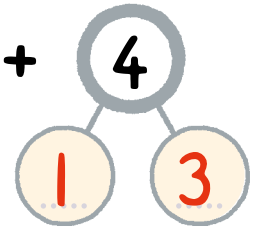
9 + 5 = 9 + 1 + 4 = 14



7 + 6 = 7 + 3 + 3 = 13



8 + 7 = 8 + 2 + 5 = 15



9 + 4 = 9 + 1 + 3 = 13

Sovelluksen koodi

A Käytämme ympyrämallia apuna kymmenylityksessä. Yhteenlaskettava on tarkoitus hajottaa niin, että voidaan laskea ensin täysi kymmen.

Pe-laa pa-rin kans-sa.

Oh-jeet:
1. Hei-tä nop-paa.
2. Li-sää no-pan sil-mä-lu-ku las-kuun ja val-taa las-kun tu-los lau-dal-ta vä-rit-tä-mäl-lä.
3. Jos vas-taus ei o-le va-paa-na, vuo-ro siir-tyy seu-raa-val-le.
4. Las-ke lo-puk-si val-taa-ma-si ruu-dut. Kum-pi sai e-nem-män?

Pe-li 1: 7 + ...

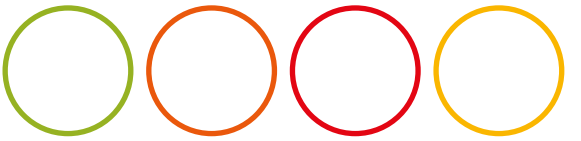
8	9	8	9	13	13	10	9
8	13	9	12	11	9	8	8	11
11	8	13	8	12	10	13	11
8	12	8	10	9	10	13	12	8

Pe-li 2: 8 + ...

9	14	11	14	10	9	11	10
12	10	9	12	13	11	13	14	9
11	13	14	10	13	14	12	11
14	10	9	12	11	10	9	13	14

B Peliä pelataan vain toisen oppilaan kirjaan.

9.3 Li-sää kym-men-y-li-tys-tä



A

Täy-den-nä yk-kö-set mää-rä-suo-ral-le. Las-ke.

7+5 = 7+3+2 =

9+4 = 13

8+3 = 11

9+2 = 11

B

Las-ke.

9 + 5 = 13
(1, 4)

8 + 4 = 12
(2, 2)

8 + 7 = 15
(2, 5)

7 + 8 = 15
(3, 5)

7 + 6 = 13
(3, 3)

8 + 3 = 11
(2, 1)

9 + 7 = 16
(1, 6)

8 + 6 = 14
(2, 4)

Sovelluksen koodi

C

Las-ke ja rat-kai-se koo-dat-tu vies-ti.

11 O | 12 S | 13 A | 14 I | 15 T | 16 H | 17 E | 18 N

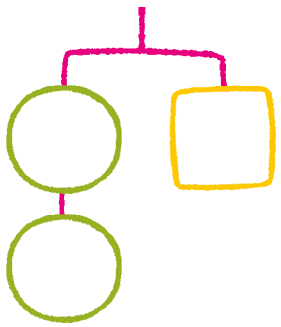
9+2 = 11	8+4 = 12	9+4 = 13	7+5 = 12	7+7 = 14	8+7 = 15	
O	S	A	S	I	T	,

8+8 = 16	9+5 = 14	9+8 = 17	9+9 = 18	6+5 = 11	8+5 = 13	
H	I	E	N	O	A	!

D

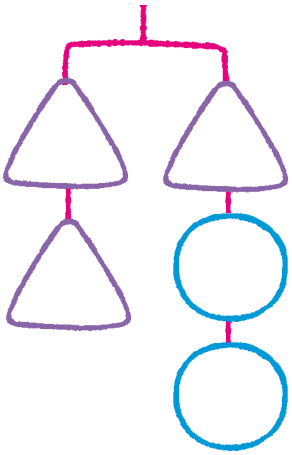
Päät-te-le, mi-kä lu-ku so-pii ku-vi-on pai-kal-le.

Pulmapalat



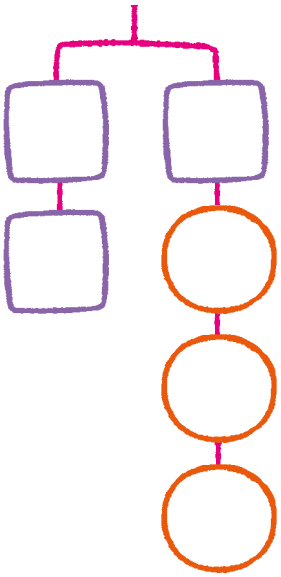
□ = 2

○ = 1



△ = 8

○ = 4



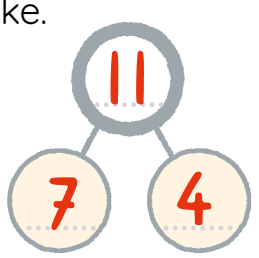
□ = 6

○ = 2

9.4 Kym-men-y-li-tys ja ma-tik-ka-ta-ri-nat

A **Ker-ro** ma-tik-ka-ta-ri-na. Täy-den-nä lu-vut ja las-ke.

Tehtävässä on monia vastauksia.



7 + 4 = 11

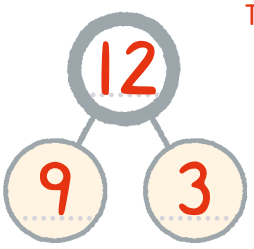
4 + 7 = 11

11 − 4 = 7

11 − 7 = 4

B **Ker-ro** ma-tik-ka-ta-ri-na. Täy-den-nä lu-vut ja las-ke.

Tehtävässä on monia vastauksia.



9 + 3 = 12

3 + 9 = 12

12 − 9 = 3

12 − 3 = 9

Sovelluksen koodi

C

Täy-den-nä yk-kö-set mää-rä-suo-ral-le. Las-ke.

8+5 = 13

9+3 = 12

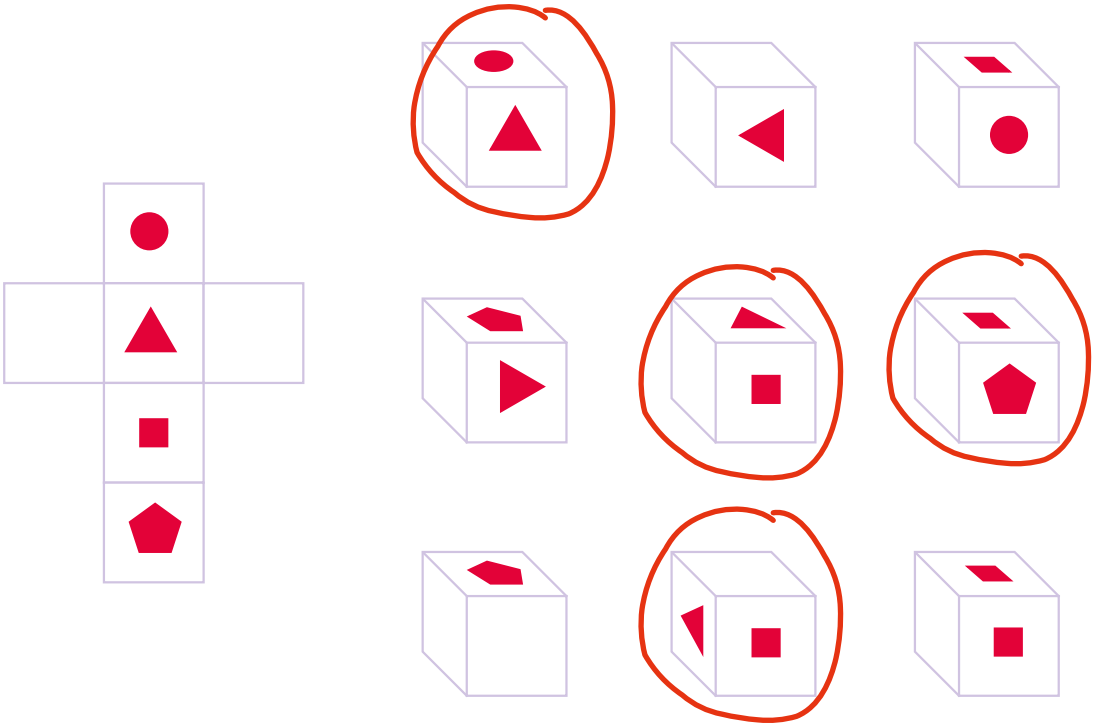
7+4 = 11

8+4 = 12

D

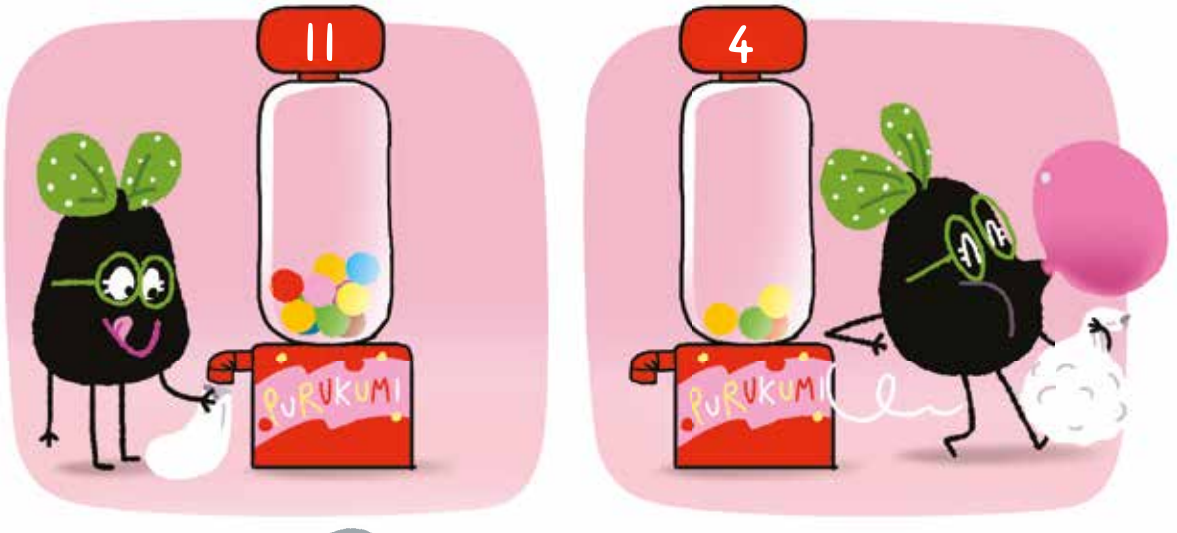
Päät-te-le. Mit-kä kuu-ti-ois-ta on ra-ken-net-tu a-va-tus-ta mal-lis-ta?

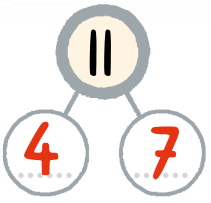
Pulmapalat



9.5 Vä-hen-ne-tään pie-ni-ä lu-ku-ja

A **Mer-kit-se** las-ku ja las-ke. Kuin-ka mon-ta pu-ru-ku-mi-a Zo-ra os-ti?





11 - 4 = 7

12 - 3 = 12 - 2 - 1

12 - 3 = 10 - 1

12 - 3 = 9

12 - 5 = 12 - 2 - 3

12 - 5 = 12 - 5

12 - 5 = 7

Sovelluksen koodi

AB Harjoittelemme vähennyslaskustrategioita määräsuoran avulla. Vähennämme pieniä lukuja määräsuoran loppuosasta kymmenen kautta.

B **Vä-hen-nä** mää-rä-suo-ral-ta. Las-ke.

12 − 4 = 12 − 2 − 2

12 − 4 = 12 − 4

12 − 4 = 8

11 − 3 = 11 − 1 − 2

11 − 3 = 11 − 2

11 − 3 = 8

11 − 5 = 11 − 1 − 4

11 − 5 = 11 − 5

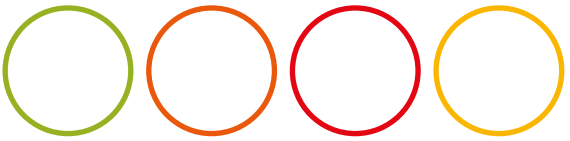
11 − 5 = 6

13 − 4 = 13 − 3 − 1

13 − 4 = 13 − 4

13 − 4 = 9

9.6 Har-joi-tel-laan kym-men-y-li-tys-tä



A **Las-ke.** Käy-tä a-pu-na ym-py-rä-mal-li-a.

12 − 4 (2, 2) = 12 − 2 − 2 = 8

12 − 5 (2, 3) = 12 − 2 − 3 = 7

11 − 3 (1, 2) = 11 − 1 − 2 = 8

13 − 5 (3, 2) = 13 − 3 − 2 = 8

14 − 6 (4, 2) = 14 − 4 − 2 = 8

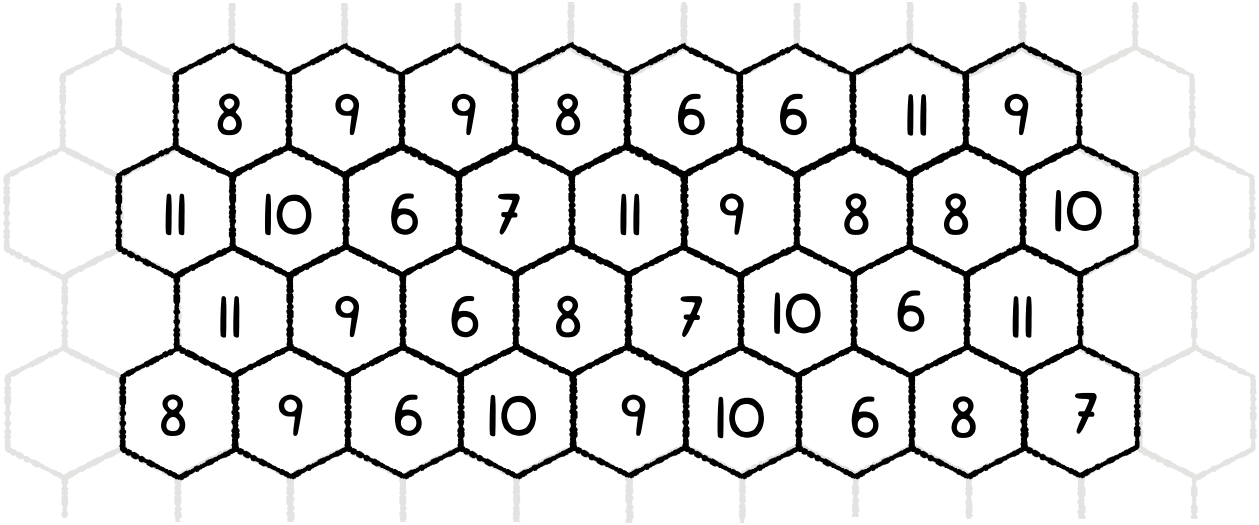
Sovelluksen koodi

A Käytämme ympyrämallia apuna kymmenylityksessä. Vähentäjä on tarkoitus hajottaa niin, että voidaan vähentää ensin kymmeneen.

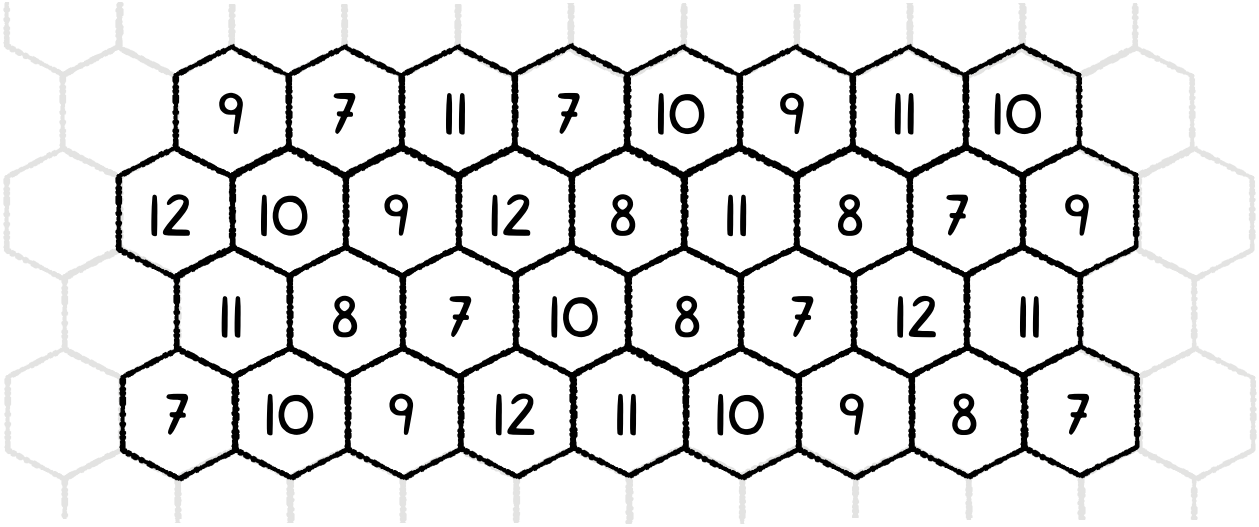
B **Pe-laa** pa-rin kans-sa.

Oh-jeet:
1. Hei-tä nop-paa.
2. Vä-hen-nä no-pan sil-mä-lu-ku lu-vus-ta ja val-taa las-kun tu-los lau-dal-ta vä-rit-tä-mäl-lä.
3. Jos vas-taus ei o-le va-paa-na, vuo-ro siir-tyy seu-raa-val-le.
4. Las-ke lo-puk-si val-taa-ma-si ruu-dut. Kum-pi sai e-nem-män?

Pe-li 1: 12 – .....



Pe-li 2: 13 – .....



B Peliä pelataan vain toisen oppilaan kirjaan.

9.7 Li-sää kym-men-y-li-tys-tä

A Vä-hen-nä määä-rä-suo-ral-ta. Las-ke.

14 − 5 = 14 − 4 − 1 = 10 − 1 = 9

11 − 2 = 11 1 1 9

12 − 3 = 12 2 1 9

11 − 4 = 11 1 3 7

B Las-ke.

11 − (4 = 1 + 3) = 11 − 1 − 3 = 7

13 − (5 = 3 + 2) = 13 3 2 8

11 − (3 = 1 + 2) = 11 1 2 8

12 − (5 = 2 + 3) = 12 2 3 7

12 − (4 = 2 + 2) = 12 2 2 8

11 − (2 = 1 + 1) = 11 1 1 9

14 − (5 = 4 + 1) = 14 4 1 9

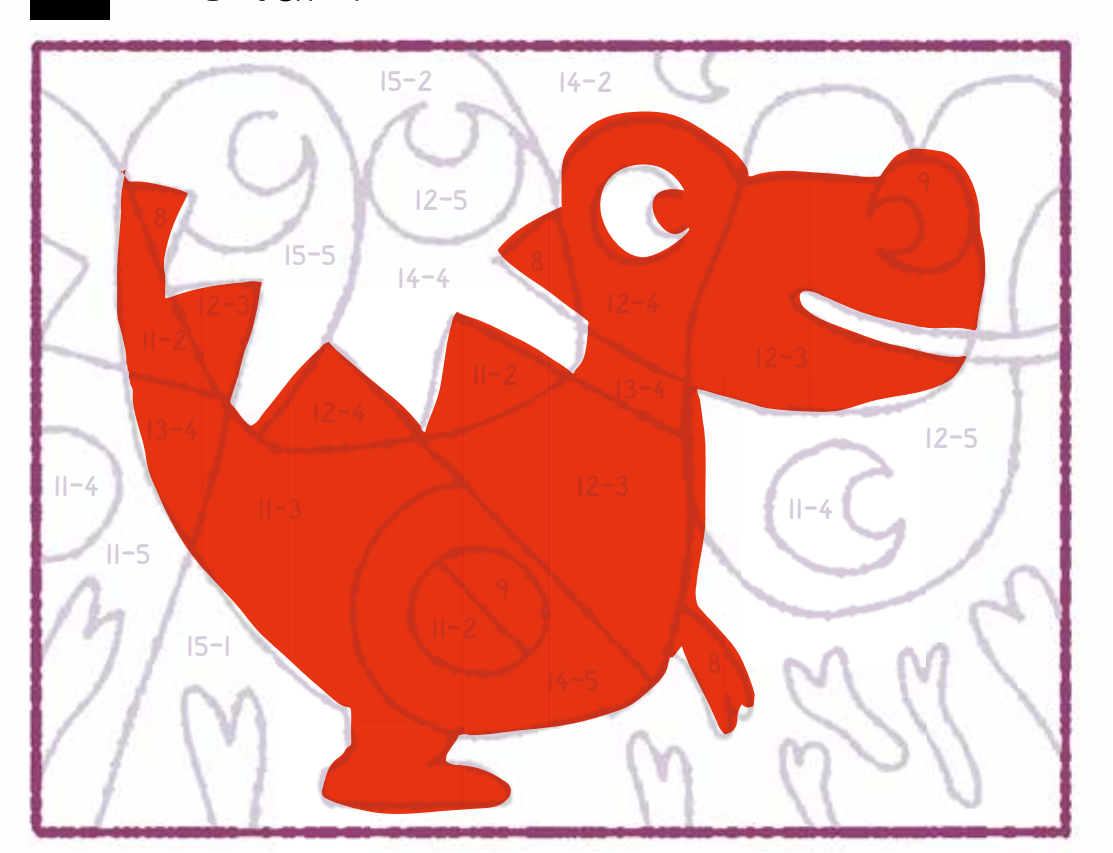
11 − (5 = 1 + 4) = 11 1 4 6

Sovelluksen koodi

C

Las-ke ja vä-ri-tä.

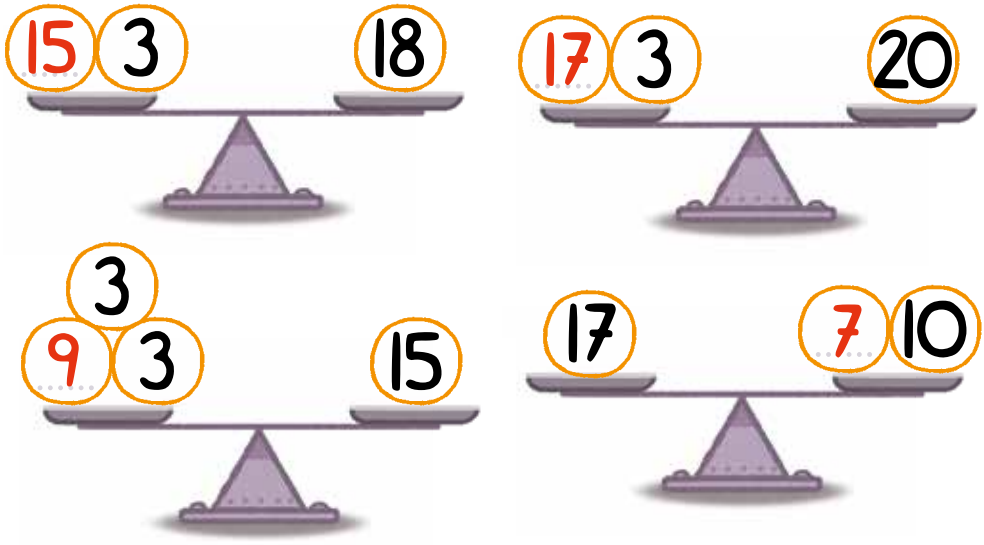
■ = 8 tai 9



D

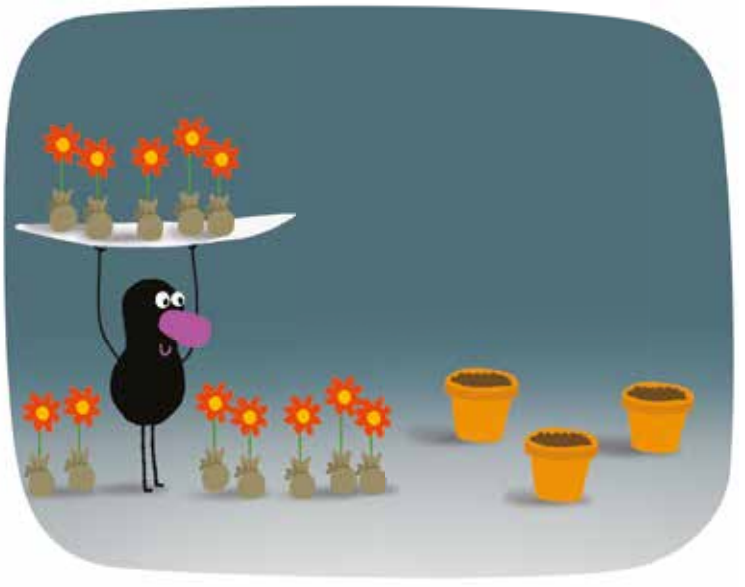
Päät-te-le puut-tu-va lu-ku ja säi-ly-tä ta-sa-pai-no.

Pulmapalat



9.8 Kym-men-y-li-tys ja ma-tik-ka-ta-ri-nat

A **Ker-ro** ma-tik-ka-ta-ri-na. Täy-den-nä lu-vut ja las-ke.



12 - 3 = 9

B **Ker-ro** ma-tik-ka-ta-ri-na. Täy-den-nä lu-vut ja las-ke.

11 - 2 = 9

Sovelluksen koodi

C

Vä-hen-nä mää-rä-suo-ral-ta. Täy-den-nä ja las-ke.

13 − 5 = 13 3 2 8

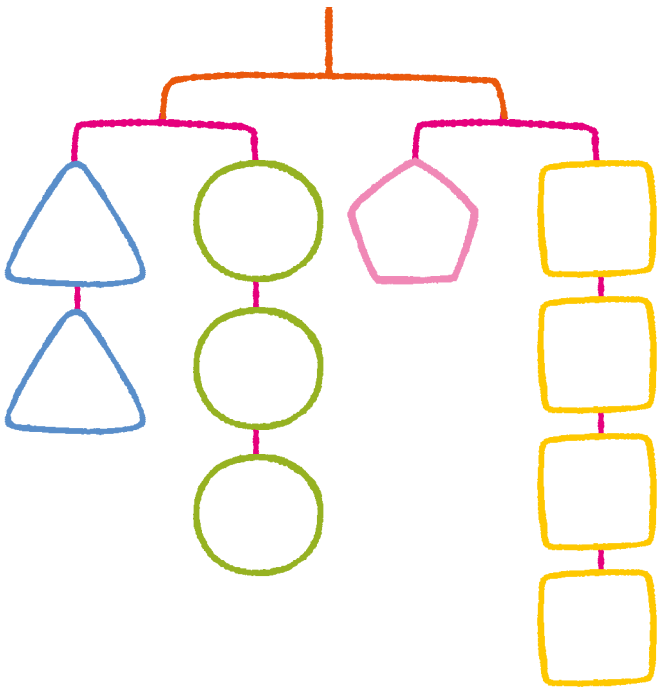
11 − 3 = 11 1 2 8

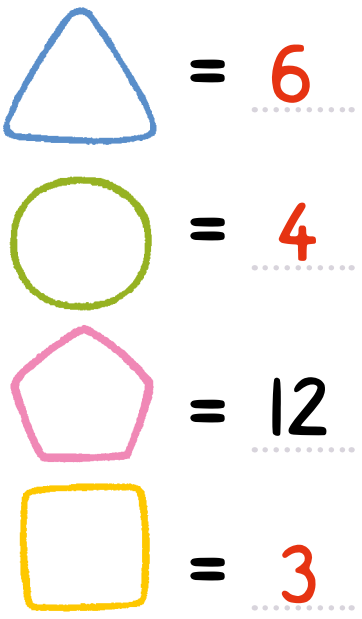
12 − 4 = 12 2 2 8

D

Päät-te-le, mi-kä lu-ku so-pii ku-vi-on pai-kal-le

Pulmapalat





= 6

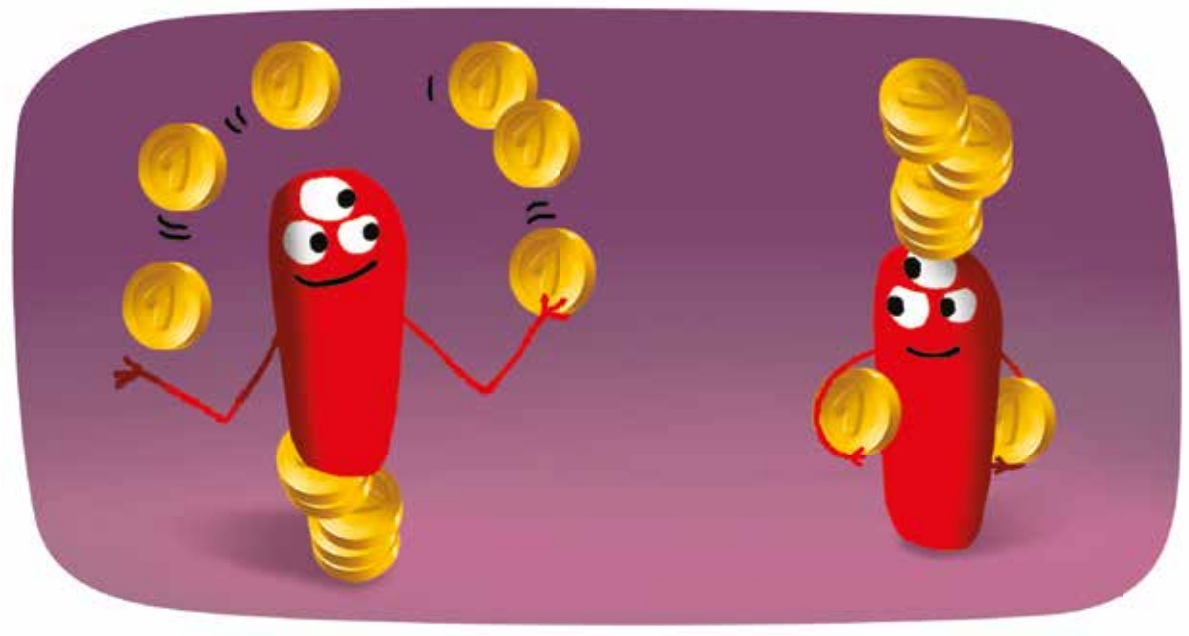
= 4

= 12

= 3

9.9 Vä-hen-ne-tään suu-ri-a lu-ku-ja

A **Mer-kit-se** las-ku ja las-ke. Kum-mal-a on e-nem-män ra-haa? Kuin-ka pal-jon?



11 − 9 = 2

13 − 9 = 4

11 − 7 = 4

11 − 8 = 3

Sovelluksen koodi

A B Harjoittelemme vähennyslaskustrategioita määräsuoran avulla. Suuria lukuja voi olla hyödyllistä vähentää myös määräsuoran alkuosasta.

B **Mie-ti** las-ku-ta-pa ja vä-hen-nä mää-rä-suo-ral-ta. Las-ke.

13 − 8 = 5

12 − 9 = 3

12 − 8 = 4

11 − 9 = 2

12 − 7 = 5

14 − 9 = 5

14 − 7 = 7	13 − 7 = 6	13 − 9 = 4
13 − 8 = 5	12 − 8 = 4	12 − 7 = 5
11 − 7 = 4	11 − 8 = 3	15 − 9 = 6
12 − 9 = 3	14 − 9 = 5	15 − 8 = 7

9.10 Li-sää kym-men-y-li-tys-tä

A Vä-hen-nä mää-rä-suo-ral-ta. Las-ke.

10 − 7 = 3

20 − 17 = 3

10 − 4 = 6

20 − 14 = 6

B Las-ke. Kek-si it-se las-ku-ja.

20 − 9 = 11

20 − 17 = 3

20 − 8 = 12

20 − 14 = 6

20 − 6 = 14

20 − 0 = 20

20 − 1 = 19

20 − 19 = 1

20 − 20 = 0

20 − 18 = 2

20 − 5 = 15

20 − 15 = 5

20 − 13 = 7

20 − 7 = 13

20 − 12 = 8

Esimerkiksi:

20 − 8 = 12

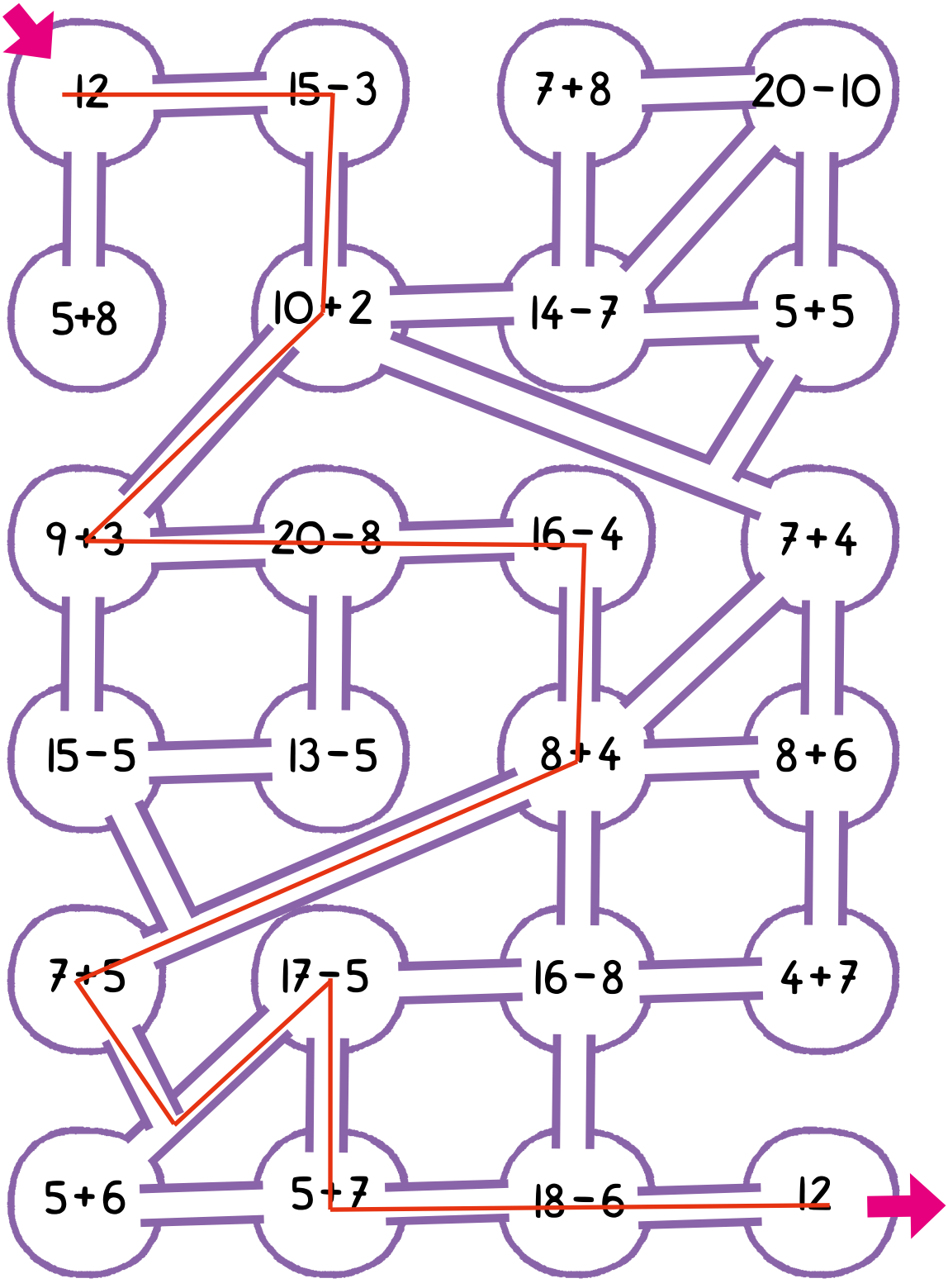
15 − 6 = 9

19 − 11 = 8

Sovelluksen koodi

C **Et-si** reit-ti. Vas-ta-us on ai-na 12.

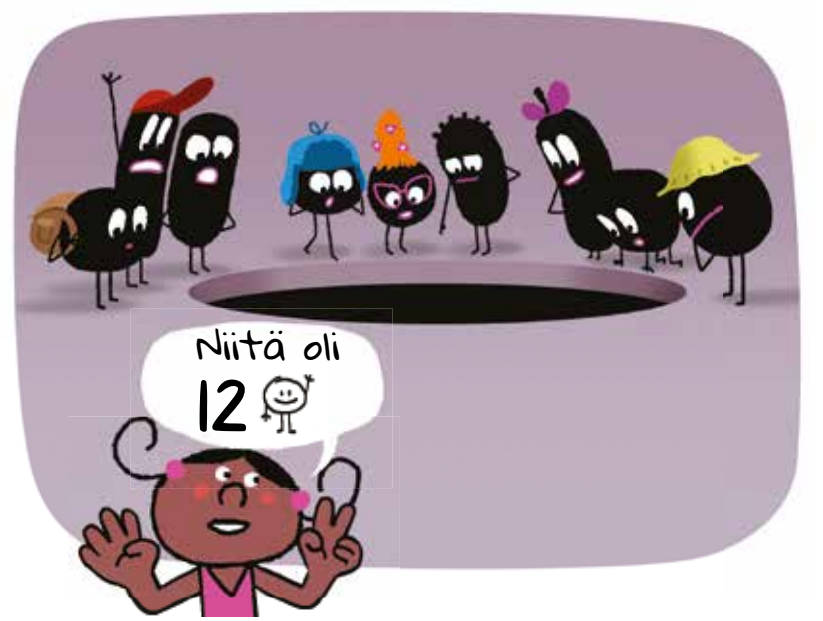
Pulmapalat

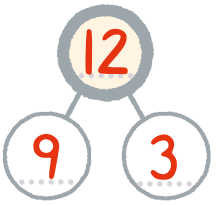


9.11 Kym-men-y-li-tys ja ma-tik-ka-ta-ri-nat

A

Ker-ro ma-tik-ka-ta-ri-na. Täy-den-nä lu-vut ja las-ke.





12 − 9 = 3

12 − 3 = 9

3 + 9 = 12

9 + 3 = 12

B

Ker-ro ma-tik-ka-ta-ri-na. Täy-den-nä lu-vut ja las-ke.

Tehtävässä on useita ratkaisuja.

11 − 7 = 4

11 − 4 = 7

4 + 7 = 11

7 + 4 = 11

Sovelluksen koodi

C

Vä-hen-nä mää-rä-suo-ral-ta. Täy-den-nä ja las-ke.

10 − 8 = 2

20 − 18 = 2

10 − 6 = 4

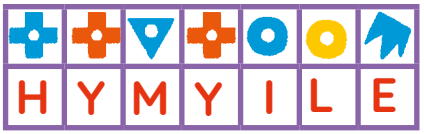
20 − 16 = 4

D

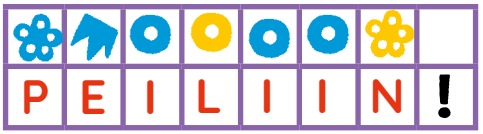
Rat-kai-se koo-dat-tu vies-ti.

Pulmapalat

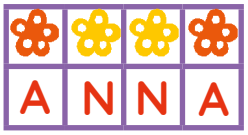
	N	K	R	T	U	L
	P	O	E	H	M	I
	A	Ä	S	Y	J	V



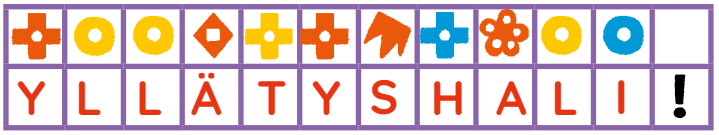
HYMYILE



PEILIIN!



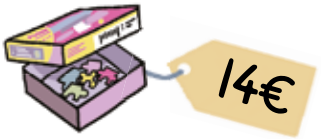
ANNA



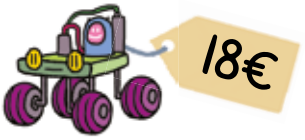
YLLÄTYSHALI!

9.12 Las-ke-taan eu-roil-la 0–20 €

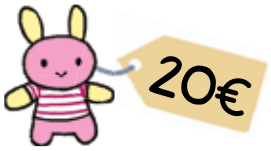
A **Piir-rä** ra-hat. Käy-tä mah-dol-li-sim-man vä-hän ko-li-koi-ta ja se-te-lei-tä.



10 5 1



10 5 2 1



20

B **Las-ke.** Kuin-ka pal-jon ra-haa on yh-teen-sä?

5€ + 1€ + 2€ = 8€

5€ + 1€ = 6€

5€+5€+5€= 15€

10€ + 5€ = 15€

10€+5€+1€= 16€

Sovelluksen koodi

C

Piir-rä ra-hat. Käy-tä mah-dol-li-sim-man vä-hän ko-li-koi-ta ja se-te-lei-tä.

11 €	=	10 1
9 €	=	5 2 2
12 €	=	10 2
7 €	=	5 2
10 €	=	10

D

Poh-di ja las-ke. Ne-nuk-ki saa maa-nan-tai-na 1 €, tiis-tai-na 2 €, kes-ki-viik-ko-na 3 € jne. Kuin-ka pal-jon ra-haa on yh-teen-sä sun-nun-tai-na?

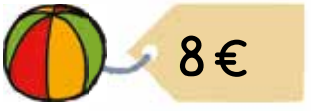
Pulmapalat

ma	1€
ti	2€
ke	3€
to	4€
pe	5€
la	6€
su	7€

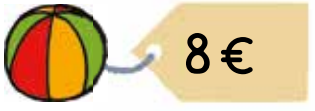
1€+2€+3€+4€+5€+6€+7€=28€

9.13 Os-tok-set 0–20 €

A **Las-ke.** Kuin-ka pal-jon os-tok-set mak-sa-vat yh-teen-sä?



= 16 €



= 17 €

= 11 €

= 16 €

B **Las-ke.** Kuin-ka pal-jon os-tok-set mak-sa-vat?

Tehtävässä on useita ratkaisuja.

= 18 €

= 15 €

= 12 €

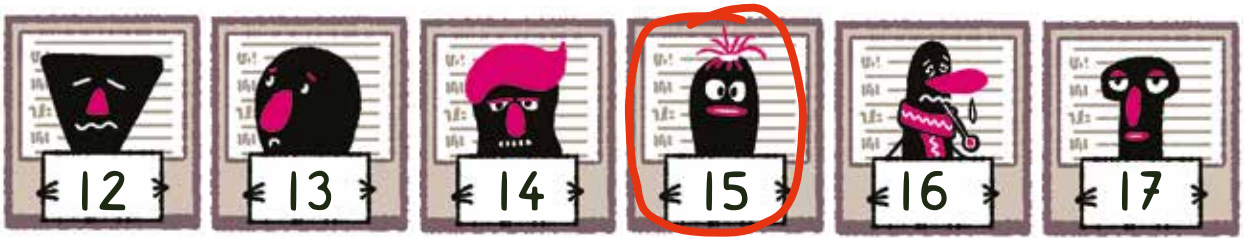
= 17 €

Sovelluksen koodi

C

Las-ke. Lu-ku, jo-ka ei o-le tu-los-ten jou-kos-sa, o-soit-taa syyl-li-sen.

19 − 7 = 14	16 − 2 = 14	19 − 5 = 14
20 − 8 = 12	14 + 2 = 16	18 − 4 = 14
4 + 8 = 12	13 − 1 = 12	17 − 4 = 13
6 + 8 = 14	9 + 7 = 16	16 + 1 = 17
13 + 4 = 17	9 + 8 = 17	9 + 3 = 12

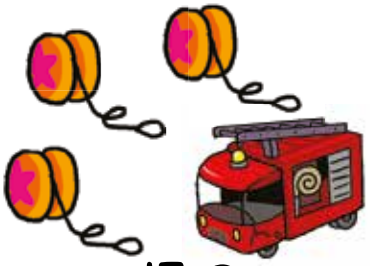


D

Poh-di. Kuin-ka pal-jon le-lut mak-sa-vat?

Pulmapalat

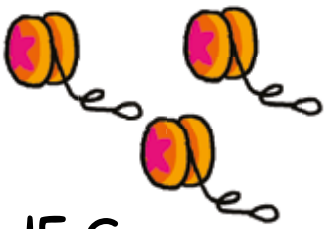
20 €



17 €

13 €

20 €



15 €

5 €

9.14 Las-ke-taan vaih-to-ra-ha

A **Täy-den-nä** tyh-jät koh-dat.

Kuin-ka pal-jon ne-nu-kil-la on ra-haa?

= 10 €

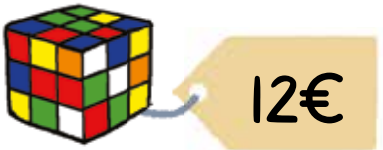
Kuin-ka pal-jon ne-nuk-ki saa vaih-to-ra-haa? 10 € − 7 € = 3 €

Kuin-ka pal-jon o-mai-suu-den ar-vo on yh-teen-sä?

7 € + + + = 10 €

Sovelluksen koodi

B **Las-ke** vaih-to-ra-ha.

Ne-nu-kil-la on	Ne-nuk-ki os-taa	Ne-nu-kin vaih-to-ra-ha
		4€
		2€
		8€
		16€
		10€

9.15 Vaih-to-ra-ha ja o-mai-suu-den ar-vo

A **Las-ke.** Kuin-ka pal-jon vaih-to-ra-ha ja os-tos o-vat yh-teen-sä?

= 15 €

= 12 €

= 12 €

= 15 €

= 9 €

= 14 €

= 18 €

Sovelluksen koodi

B **Las-ke** ja piir-rä vaih-to-ra-ha.

Vaihtorahan voi piirtää monin eri tavoin.

16€ =

5 2 1

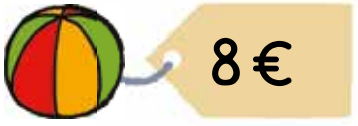
14€ =

2 2 2

20€ =

10 5

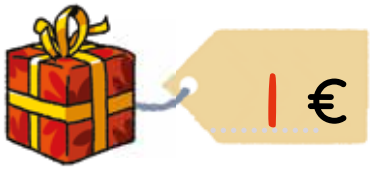
13€ =



5

Tehtävissä on useita ratkaisuja.

11€ =



10

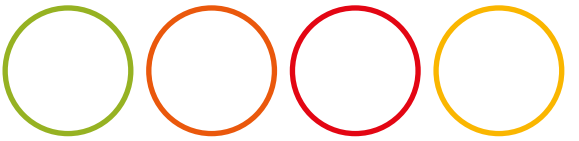
19€ =

10 2 2

15€ =

5

9.16 Har-joi-tel-laan



A Las-ke.

9 + 7 = 16 (1, 6)

8 + 8 = 16 (2, 6)

8 + 6 = 14 (2, 4)

7 + 8 = 15 (3, 5)

7 + 4 = 11 (3, 1)

8 + 5 = 13 (2, 3)

9 + 6 = 15 (1, 5)

8 + 7 = 15 (2, 5)

B Las-ke.

15 − 6 = 15−5−1= 9 (5, 1)

13 − 5 = 13 3 2 8 (3, 2)

13 − 6 = 13 3 3 7 (3, 3)

11 − 4 = 11 1 3 7 (1, 3)

12 − 5 = 12 2 3 7 (2, 3)

12 − 6 = 12 2 4 6 (2, 4)

14 − 7 = 14 4 3 7 (4, 3)

14 − 6 = 14 4 2 8 (4, 2)

Sovelluksen koodi

C

Las-ke. Kuin-ka pal-jon ra-haa on yh-teen-sä?

 +  +  = 13€

 +  +  = 17€

 +  +  = 15€

 +  +  = 17€

 +  +  = 12€

 +  +  = 13€

D

Las-ke. Kuin-ka pal-jon os-tok-set mak-sa-vat yh-teen-sä?

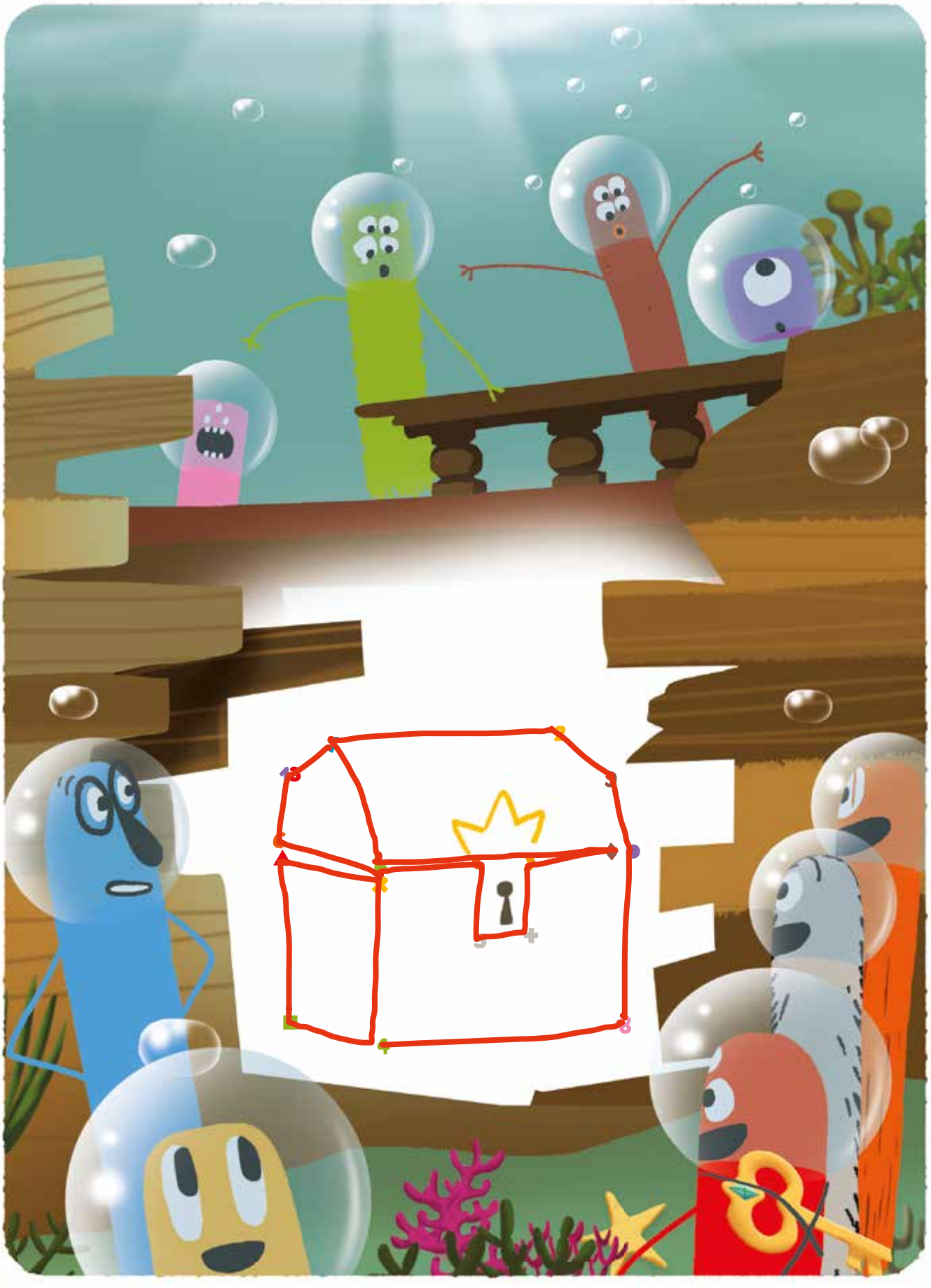
Os-tok-set mak-sa-vat
13€ yh-teen-sä.

Os-tok-set mak-sa-vat
17€ yh-teen-sä.

Jakso 10

Mittaaminen

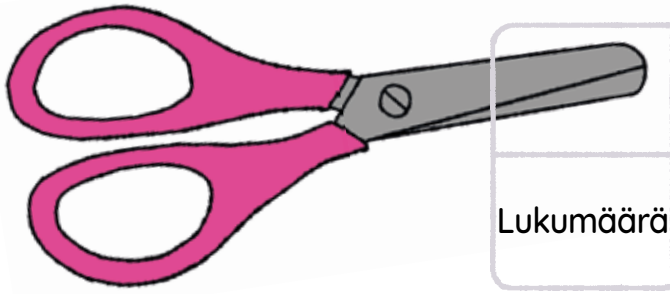
- Mitataan vertailemalla
- Mitataan noomeilla
- Mittaaminen ja yhteenlasku



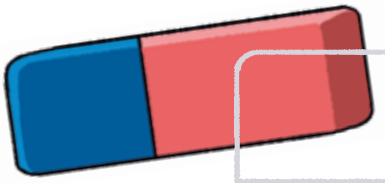
10.1 Mi-ta-taan ver-tail-len

A **Mit-taa** käm-me-nel-lä ja sor-mel-la. Täy-den-nä.

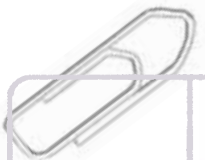
Ratkaisut vaihtelevat riippuen sormen ja kämmenen koosta.



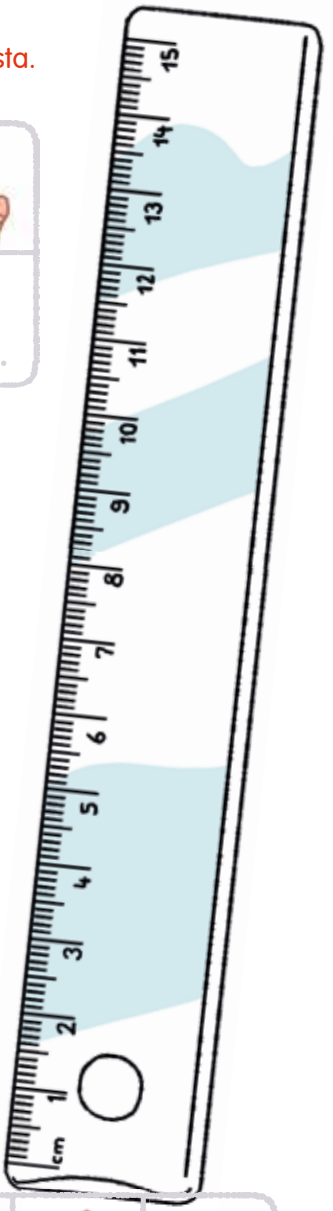
Lukumäärä		



Lukumäärä		



Lukumäärä		



Lukumäärä		

Lukumäärä		

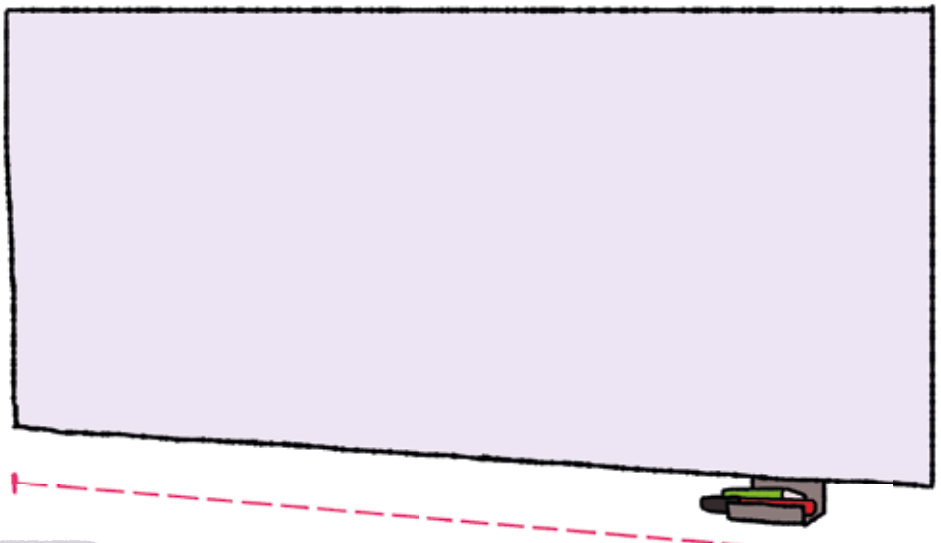
Sovelluksen koodi

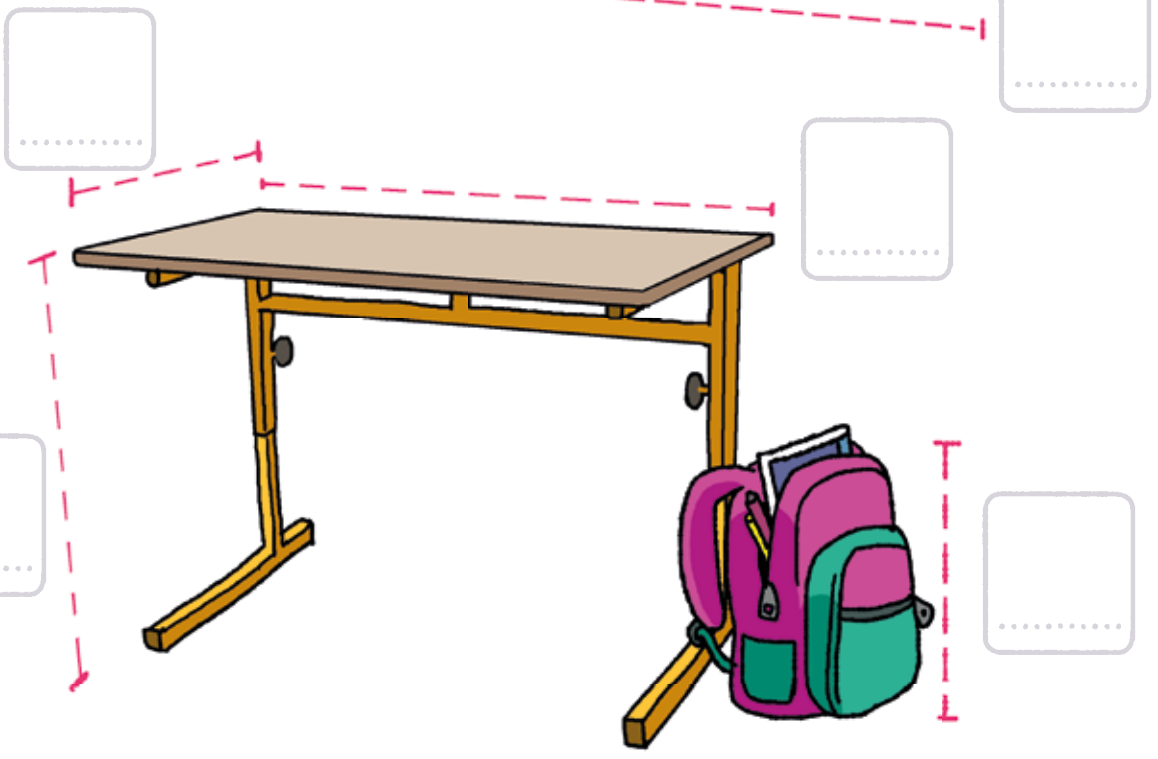
A B Harjoittelemme ymmärtämään mittaamisen käsitettä. Mittaamme asioita ympäristöstä käyttäen omaa kehoa ja erilaisia mittavälineitä.

B **Mit-taa** ja täy-den-nä.

Ratkaisut vaihtelevat riippuen mitattavasta asiasta.

Mit-taa käyt-tä-mäl-lä
kir-jan pit-kää si-vu-a.



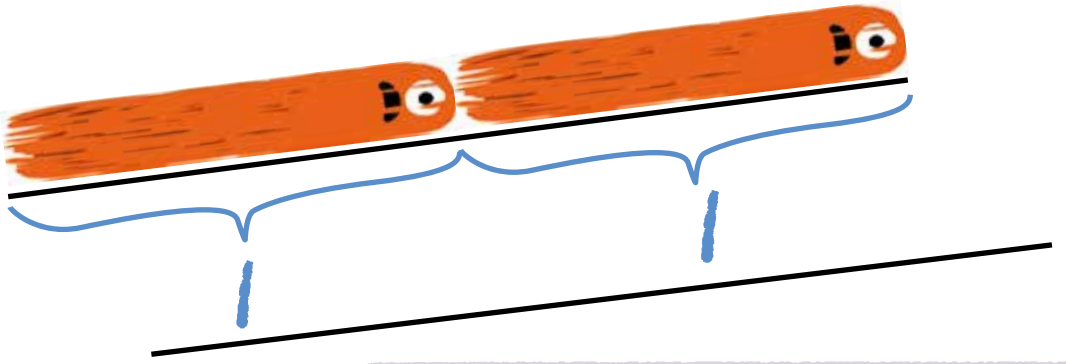


10.2 Mi-ta-taan noo-meil-la

A **Ar-vi-oi** ja mit-taa noo-meil-la. Täy-den-nä tau-luk-ko.

Ar-vi-o		Mit-ta-us-tu-los
		27
		20
		Ratkaisut vaihtelevat riippuen repun ja pöydän koosta.

B **Ar-vi-oi** ja mit-taa vii-van pi-tuus noo-meil-la. Täy-den-nä tau-luk-ko.



					
Lu-ku-mää-rä	2	3	4	6	12

Sovelluksen koodi

C **Ar-vi-oi** ja mit-taa vii-van pi-tuus noo-meil-la. Täy-den-nä tau-luk-ko.

		
Lu-ku-mää-rä	9	6

		
Lu-ku-mää-rä	2	18

D **Ar-vi-oi** ja mit-taa noo-meil-la. Täy-den-nä.

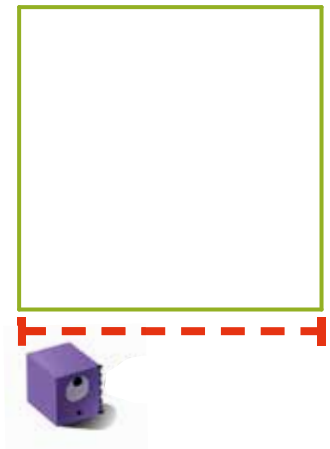
Ratkaisut vaihtelevat.

Kä-te-ni on ..... yk-kös-tä.

Pi-tuu-te-ni on ..... kymp-pi-ä.

10.3 Mit-taa-mi-nen ja yh-teen-las-ku

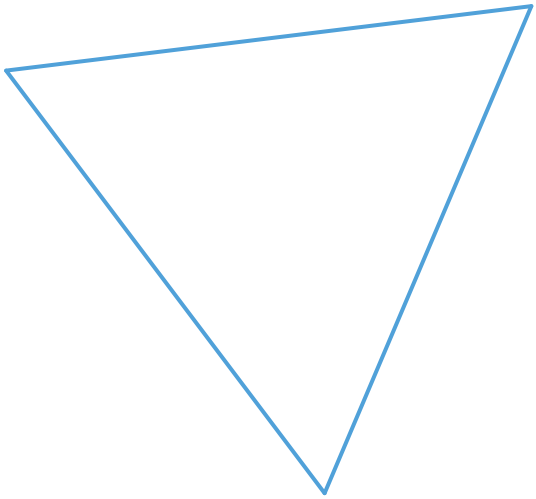
A **Mit-taa** noo-meil-la. Kuin-ka mon-ta yk-kös-tä tar-vi-taan?



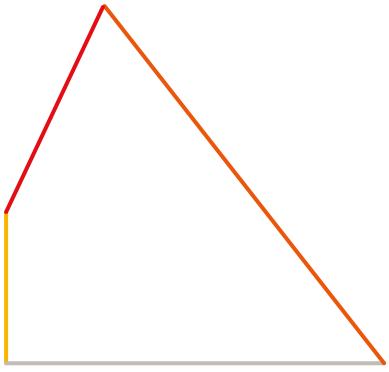
Pii-ri on

4 + 4 + 4 + 4 = 16 cm

Pii-ri on



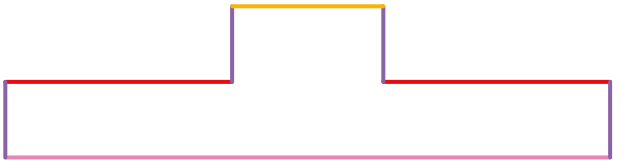
7 + 7 + 7 = 21 cm



Pii-ri on

3 + 6 + 5 + 2 = 16 cm

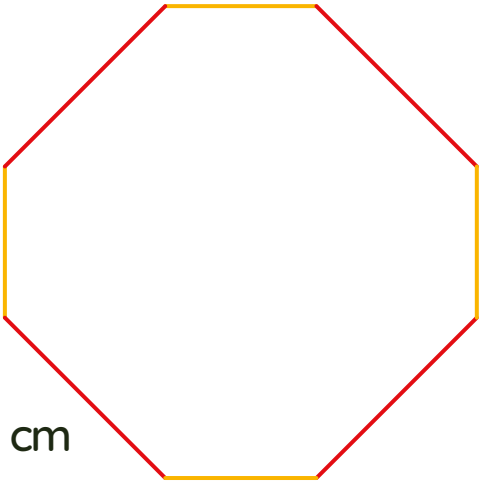
Sovelluksen koodi



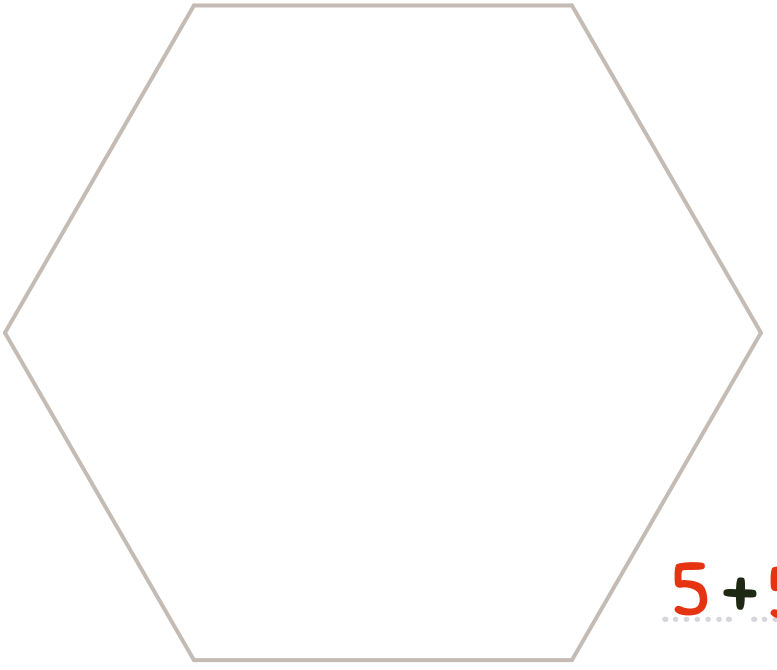
Pii-ri on

2 + 1 + 3 + 1 + 8 + 1 + 3 + 1 = 20 cm

Pii-ri on



3 + 3 + 3 + 3 + 2 + 2 + 2 + 2 = 20 cm

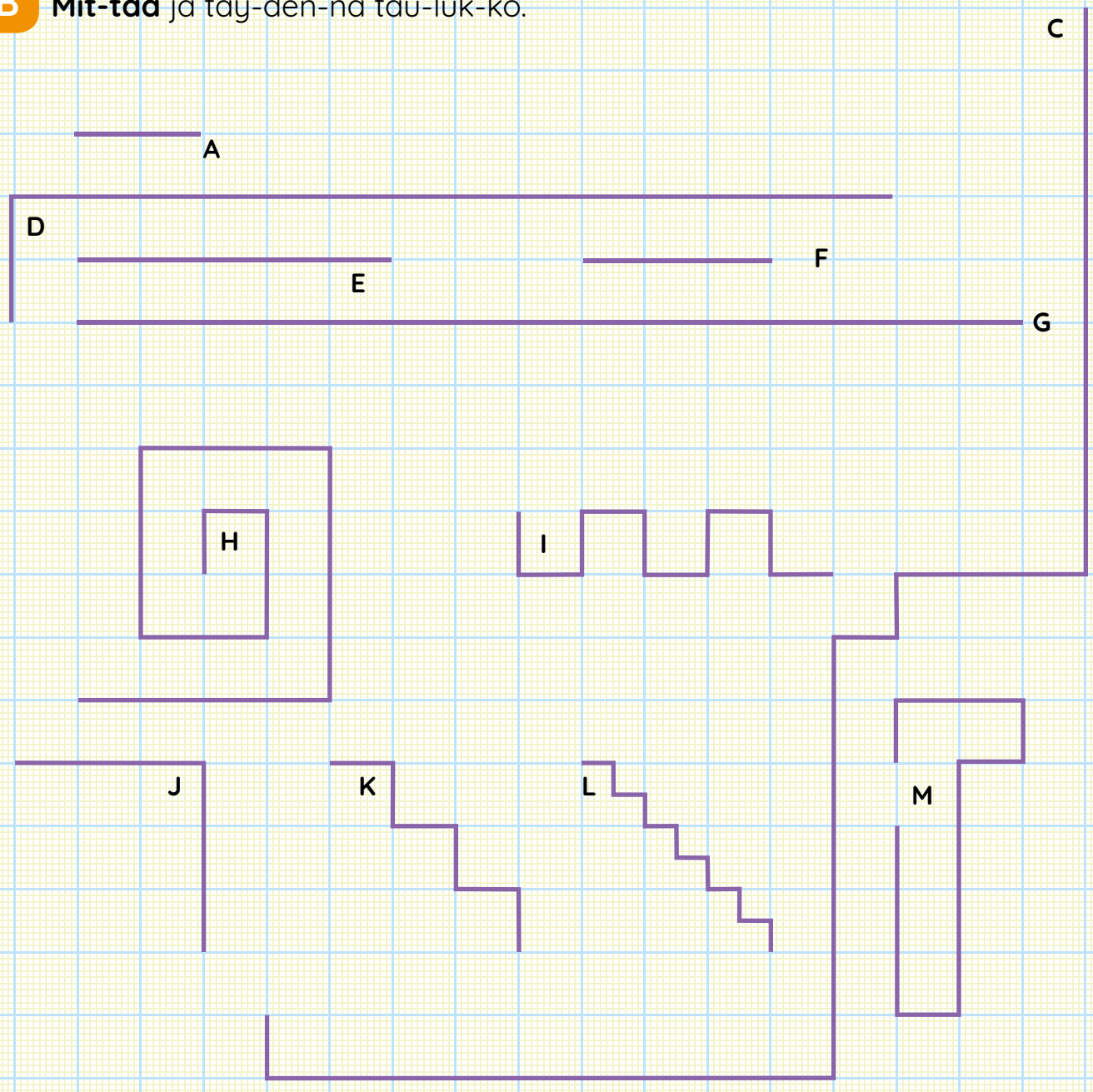


Pii-ri on

5 + 5 + 5 + 5 + 5 + 5 = 30 cm

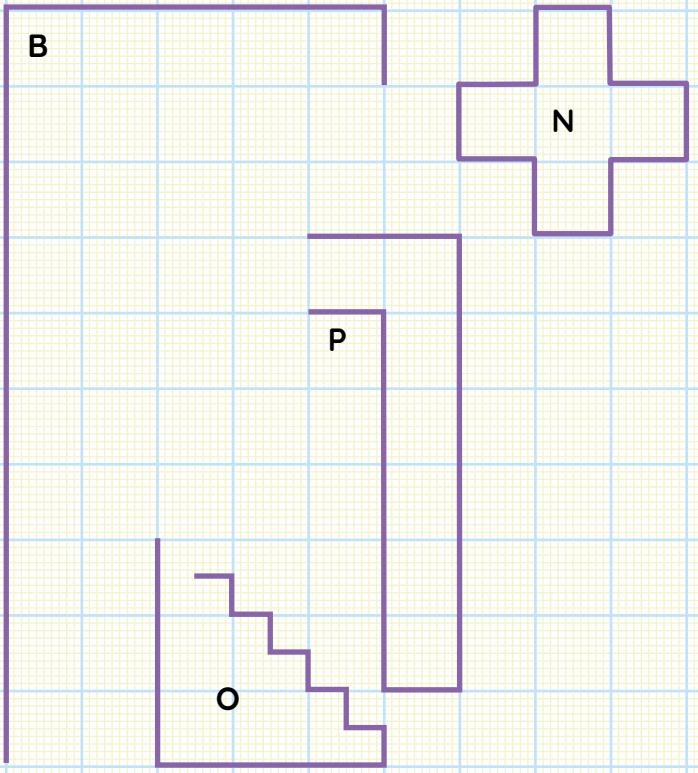
10.3 Mit-taa-mi-nen ja yh-teen-las-ku

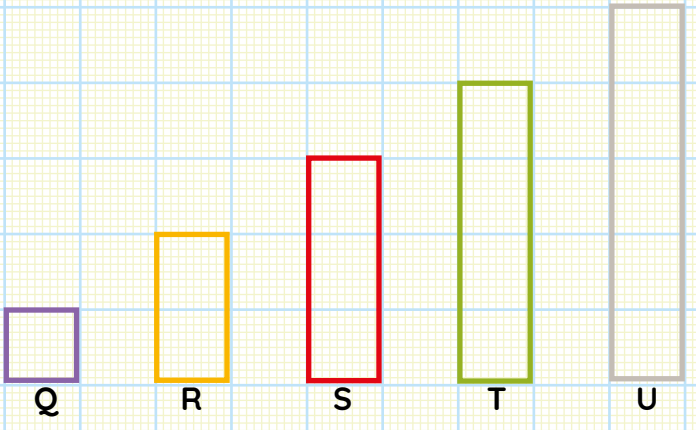
B **Mit-taa** ja täy-den-nä tau-luk-ko.



1 senttimetri (cm)

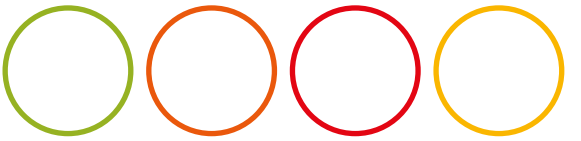
Sovelluksen koodi



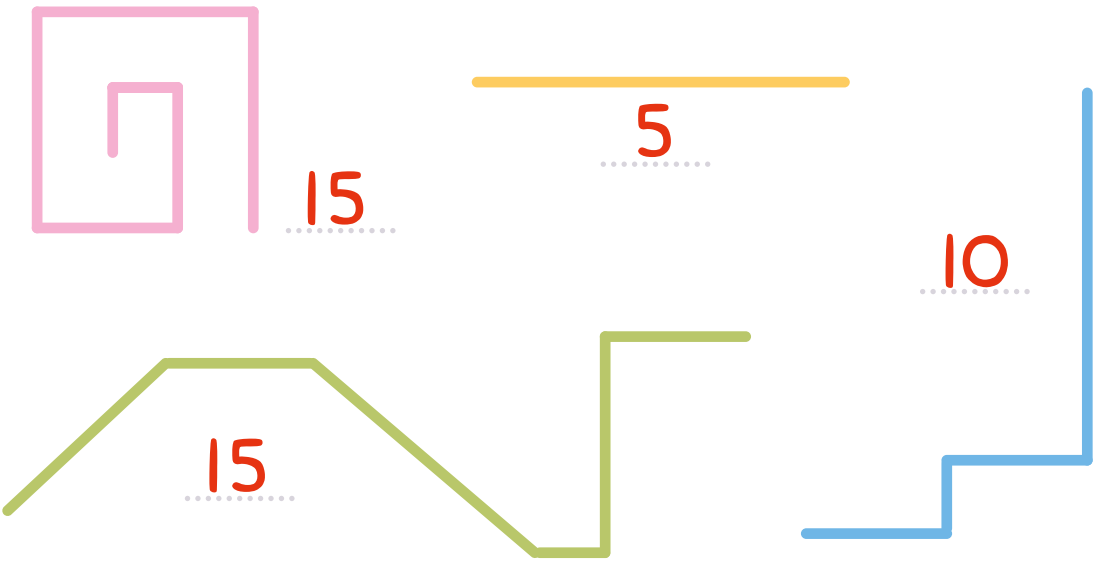


	cm
A	2
B	16
C	31
D	16
E	5
F	3
G	15
H	20
I	10
J	6
K	6
L	6
M	13
N	12
O	11
P	15
Q	4
R	6
S	8
T	10
U	12

10.4 Har-joi-tel-laan



A **Mit-taa** vii-van pi-tuus. Käy-tä noo-mi-sau-vo-ja.

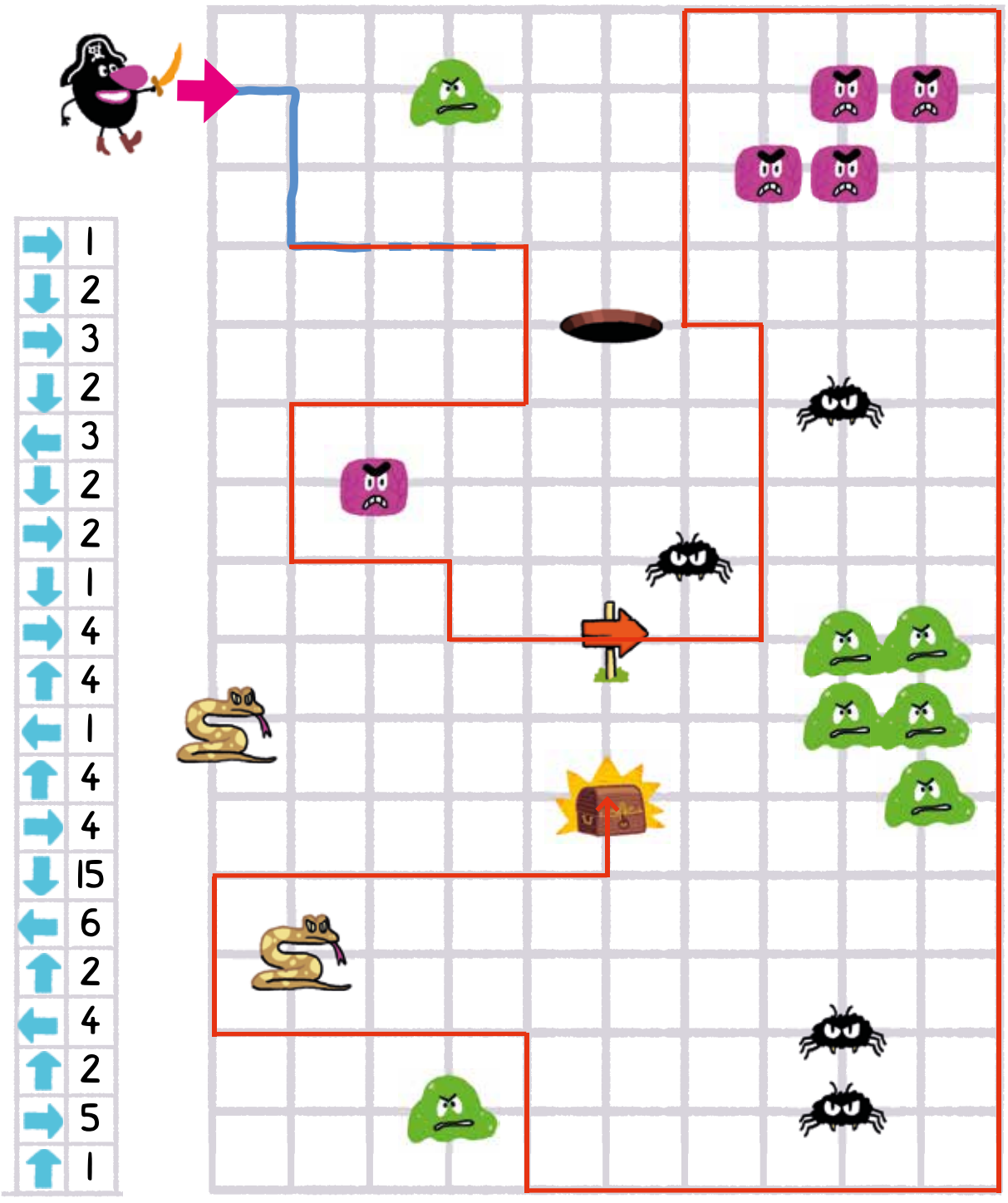


B Las-ke.

15 + 2 + 1 = 18	7 + 6 = 13	18 − 5 = 13
12 + 3 + 3 = 18	7 + 9 = 16	17 − 4 = 13
11 + 6 + 2 = 19	8 + 5 = 13	20 − 3 = 17
12 + 1 + 5 = 18	9 + 7 = 16	20 − 7 = 13
17 + 1 + 5 = 23	6 + 8 = 14	20 − 4 = 16

Sovelluksen koodi

C **Piir-rä** kap-tee-nin reit-ti. On-ko kap-tee-nil-la oi-ke-a aar-re-kart-ta?

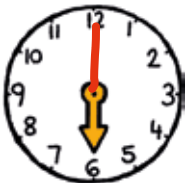



Jakso 11
Kello
• Tasatunnit
• Puolet tunnit
• Digitaalinen kello

11.1 Ta-sa-tun-nit

A **Kel-lo** on ta-san. Piir-rä mi-nuut-ti-vii-sa-ri ja kir-joi-ta kel-lon-ai-ka.

tasan 2



tasan 6

tasan 3

tasan 10

tasan 11

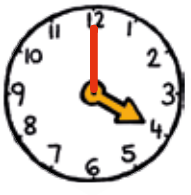
tasan 12

tasan 5

tasan 1

tasan 7

tasan 10



tasan 4

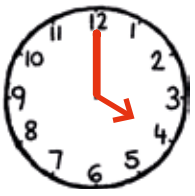
tasan 8

Sovelluksen koodi

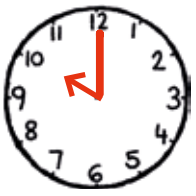
AB Harjoittelemme kellonajan kertomista. Tavoitteena on tutkia kelloa ja ajan kulumista.

B **Piir-rä** vii-sa-rit.

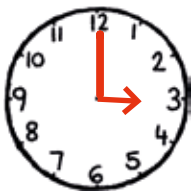
ta-san 2



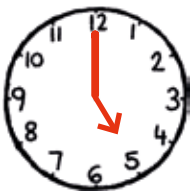
ta-san 4



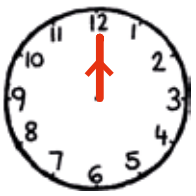
ta-san 10



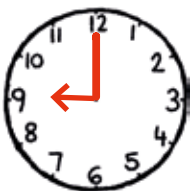
ta-san 3



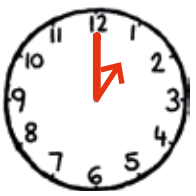
ta-san 5



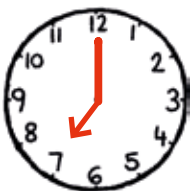
ta-san 12



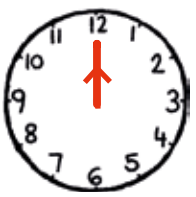
ta-san 9



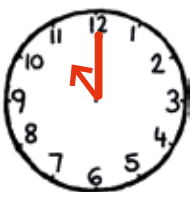
ta-san 1



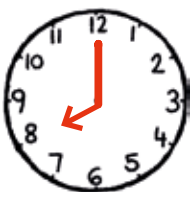
ta-san 7



ta-san 12



ta-san 11



ta-san 8

11.2 Puo-let tun-nit

A **Kir-joi-ta** kel-lon-ai-ka.

puoli 12

puoli 2

puoli 11

puoli 3

puoli 8

puoli 7

puoli 9

puoli 4

puoli 10

puoli 1

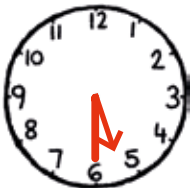
puoli 6

puoli 5

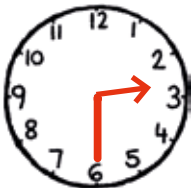
Sovelluksen koodi

B **Piir-rä** vii-sa-rit

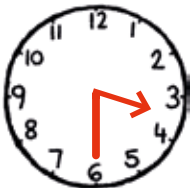
puo-li 2



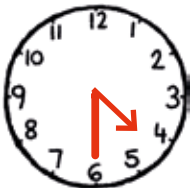
puo-li 6



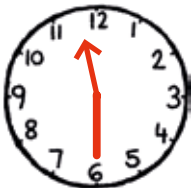
puo-li 3



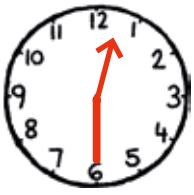
puo-li 4



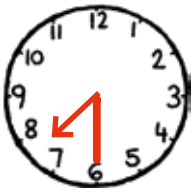
puo-li 5



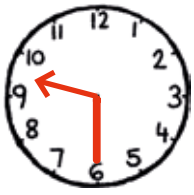
puo-li 12



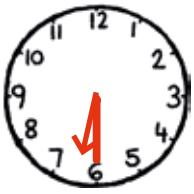
puo-li 1



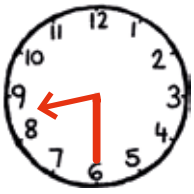
puo-li 8



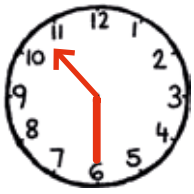
puo-li 10



puo-li 7



puo-li 9



puo-li 11

11.3 Ma-tik-ka-ta-ri-nat ja di-gi-taa-li-nen kel-lo

A **Ker-ro** ma-tik-ka-ta-ri-na. Piir-rä vii-sa-rit.

ta-san 7

puo-li 9

ta-san 11

puo-li 1

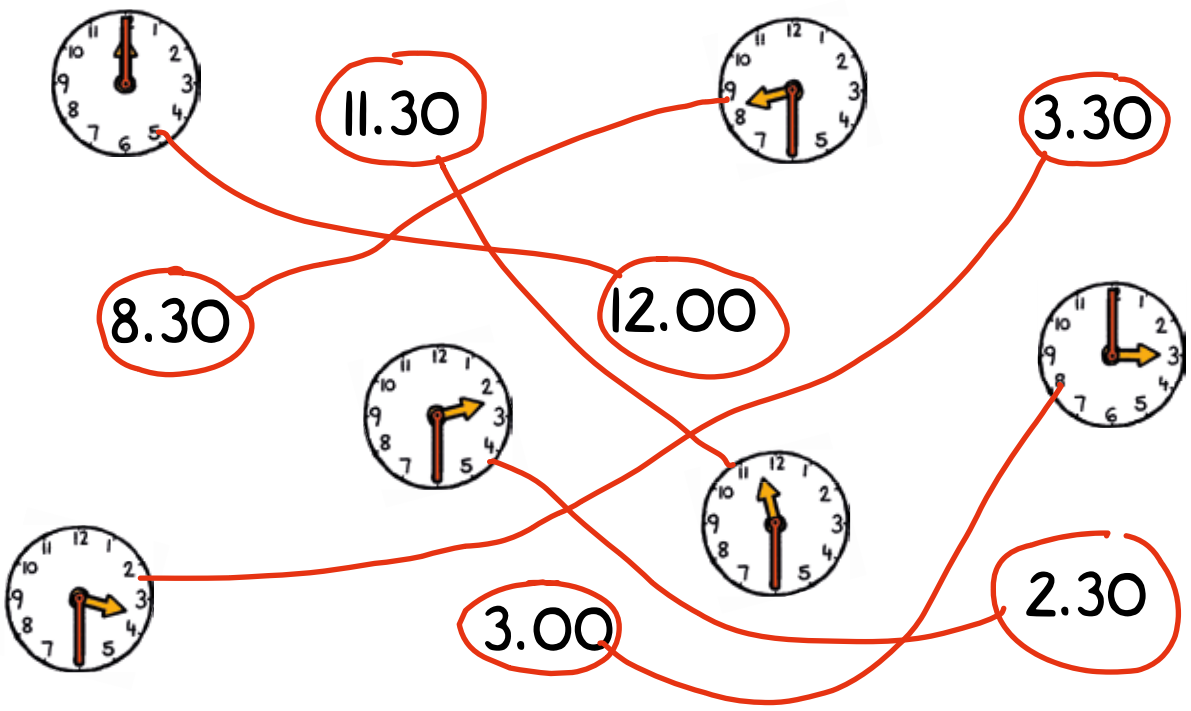
ta-san 5

puo-li 9

Sovelluksen koodi

B

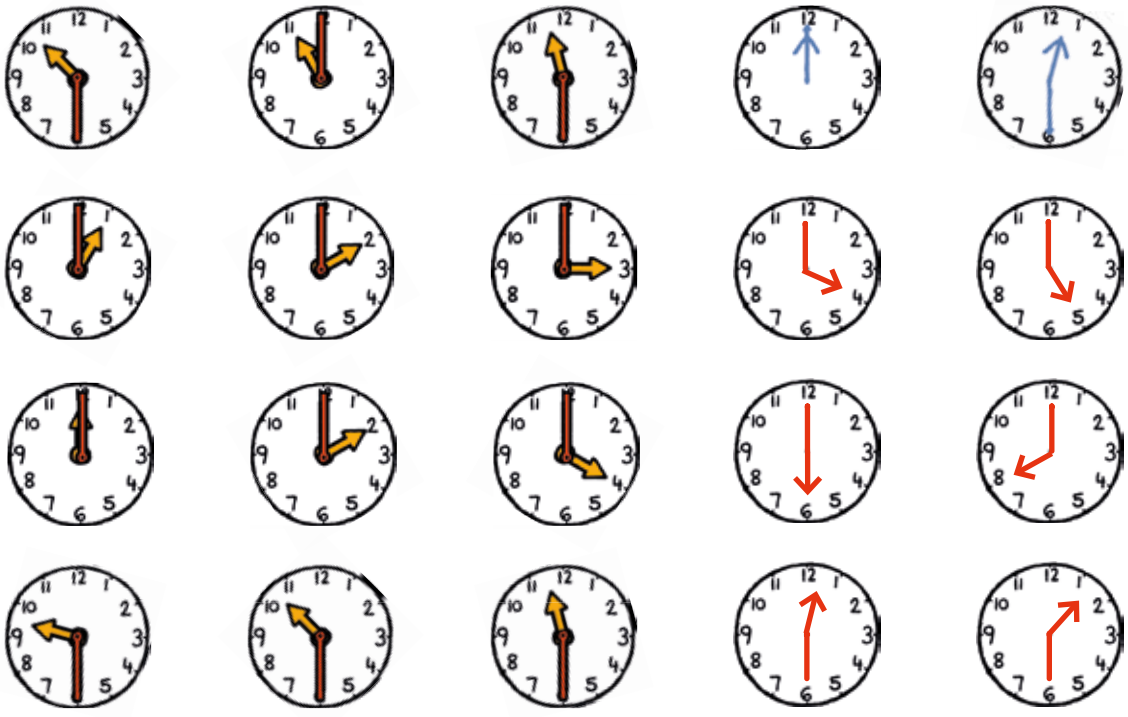
Yh-dis-tä pa-rit.



C

Kek-si sään-tö. Piir-rä vii-sa-rit.

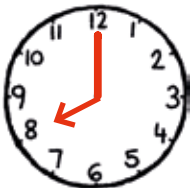
Pulmapalat



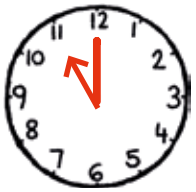
11.4 Har-joi-tel-laan

A **Piir-rä** vii-sa-rit.

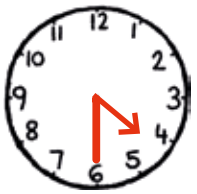
ta-san 2



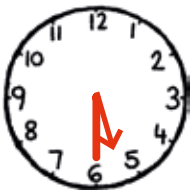
ta-san 8



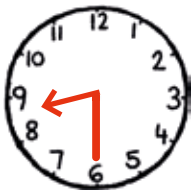
ta-san 11



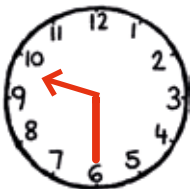
puo-li 4



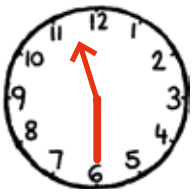
puo-li 6



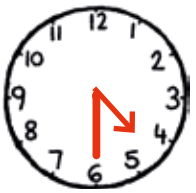
puo-li 9



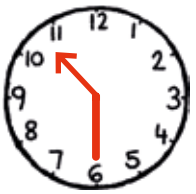
puo-li 10



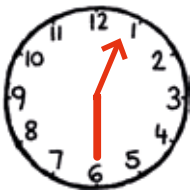
puo-li 12



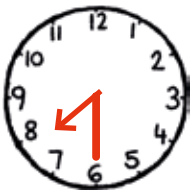
puo-li 5



10.30



12.30



7.30

Sovelluksen koodi

B

Kir-joi-ta kel-lon-a-jat.

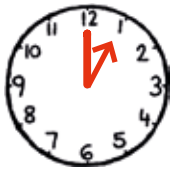

puoli 11


tasan 11


puoli 12

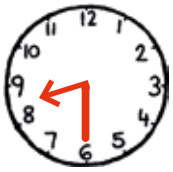

tasan 4

Piirrä tunti- ja minuuttiviisari.


ta-san 1

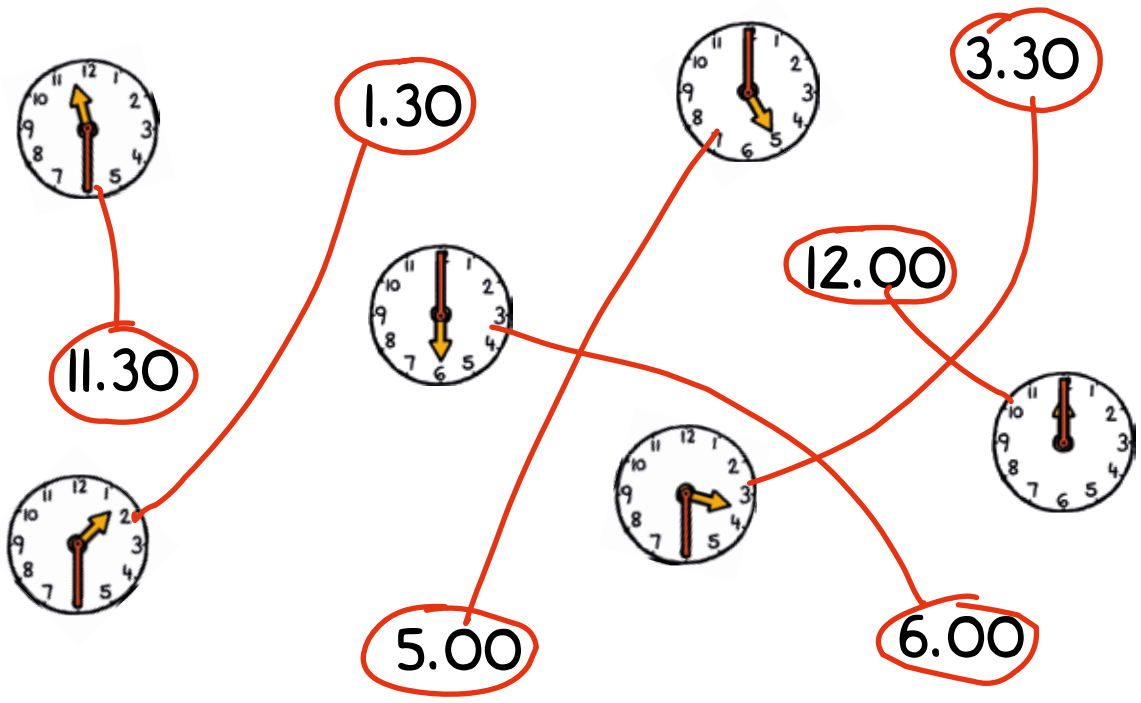

puo-li 5


ta-san 6

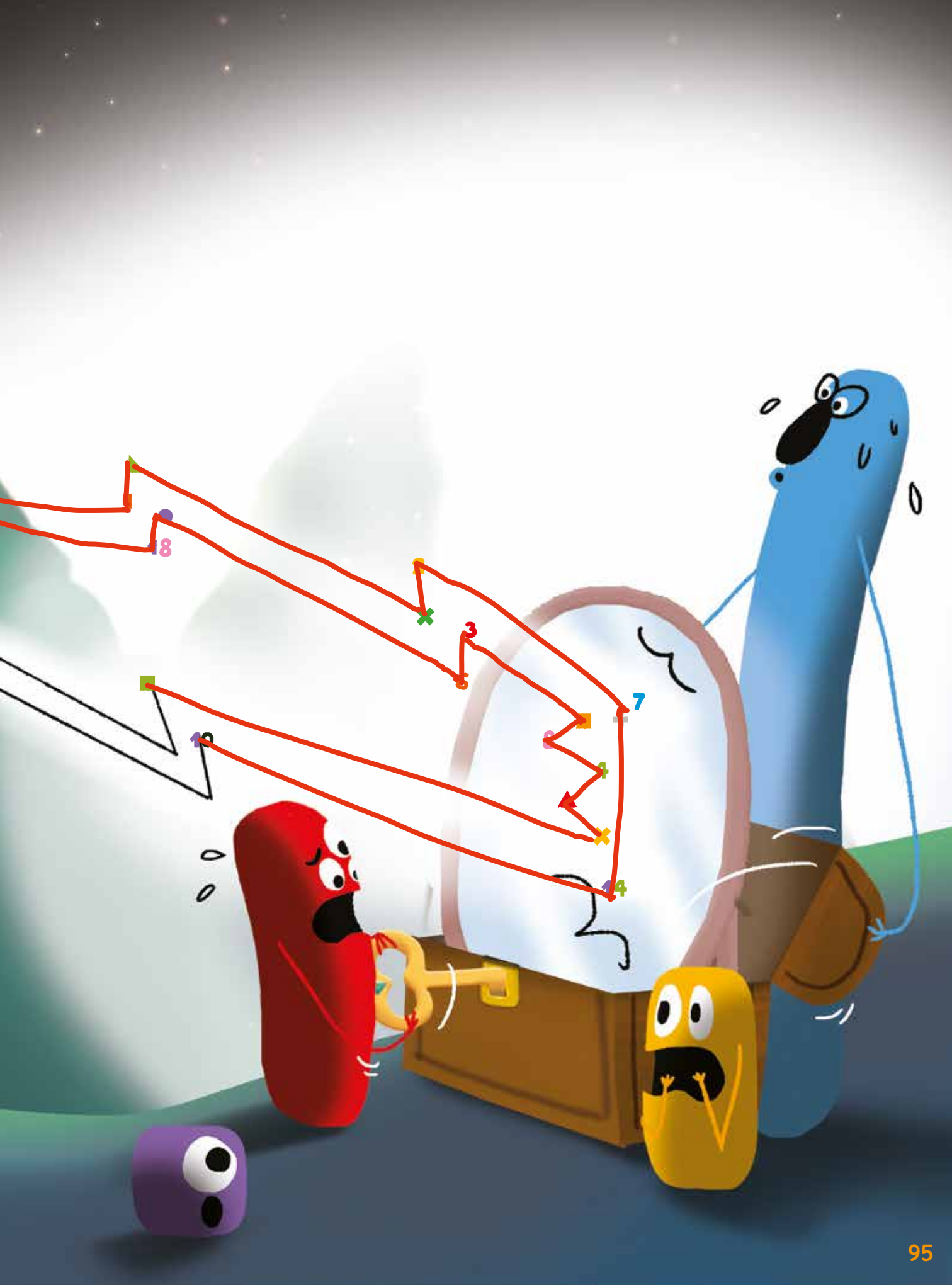

puo-li 9

C

Yh-dis-tä pa-ri.




Jakso 12
Luvut 0–100
• Ryhmittely ja yhteenlasku
• Ryhmittely kymmeniksi
• Luvut sataan asti


18
3
7
4
4

12.1 Ryh-mit-te-ly ja yh-teen-las-ku

A **Las-ke** ryh-mät ja tee las-ku.

5 + 5 + 5 = 15

4 + 4 = 8

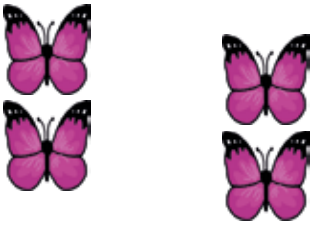
2 + 2 + 2 + 2 = 8

3 + 3 + 3 = 9

B **Las-ke** ryh-mät ja tee las-ku.

2+2+2+2+2 = 10

2 + 2 + 2 = 6

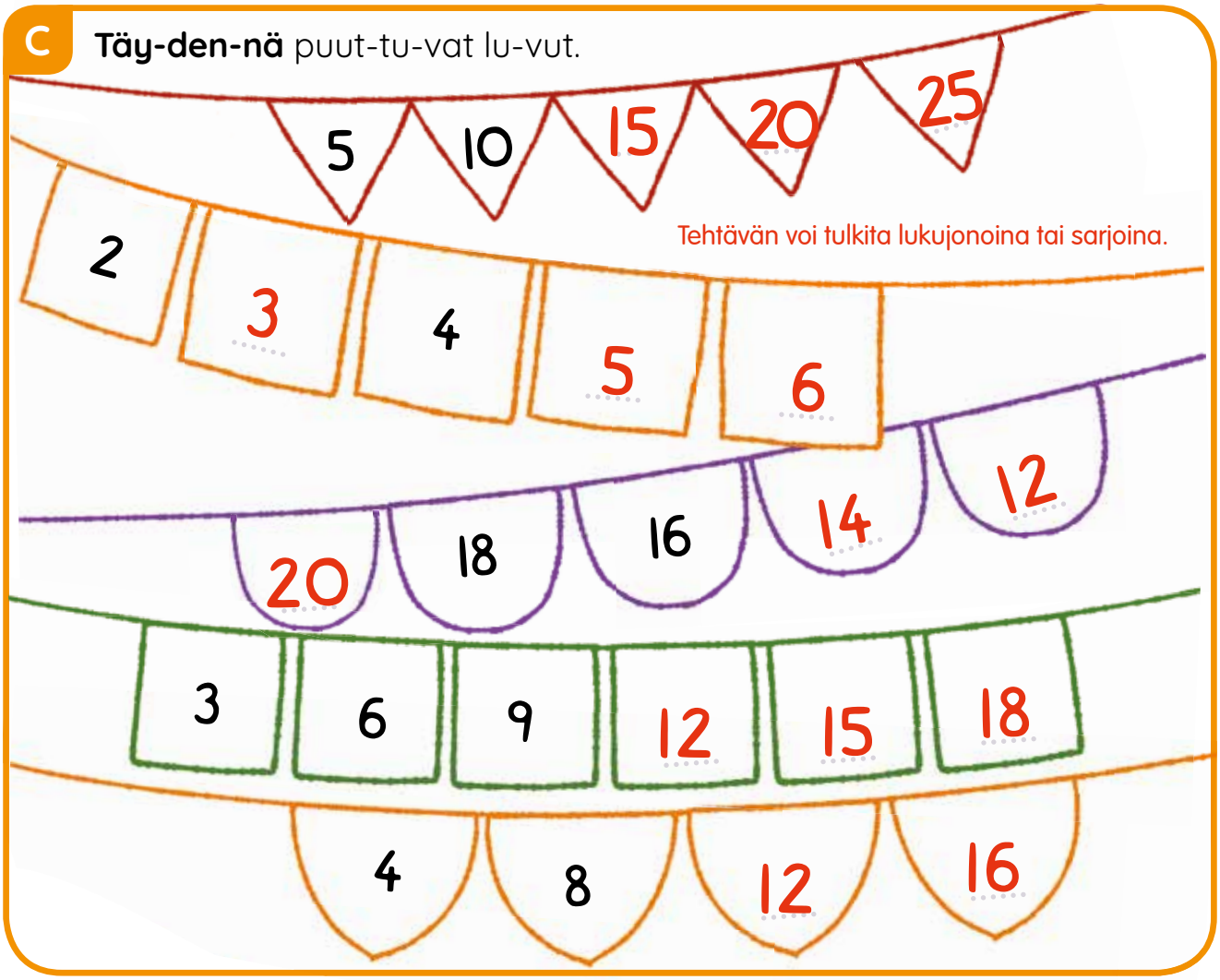


2 + 2 = 4

4 + 4 + 4 = 12

Sovelluksen koodi

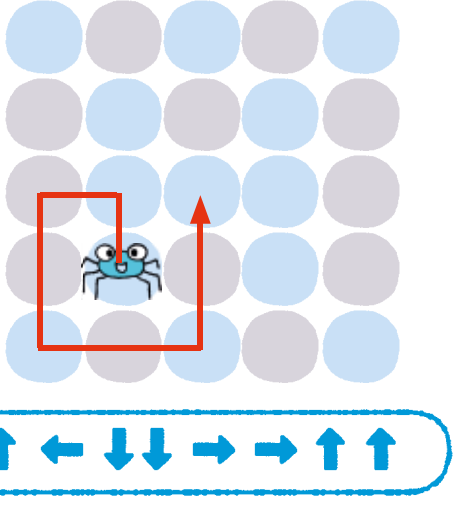
C **Täy-den-nä** puut-tu-vat lu-vut.

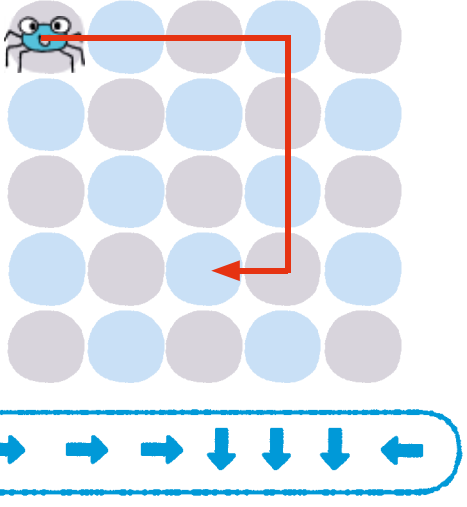


Tehtävän voi tulkita lukujonoina tai sarjoina.

D **Ohjaa** ja piirrä reitti. Minne hämähäkki päätyy?

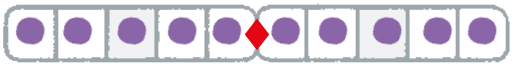
Pulmapalat



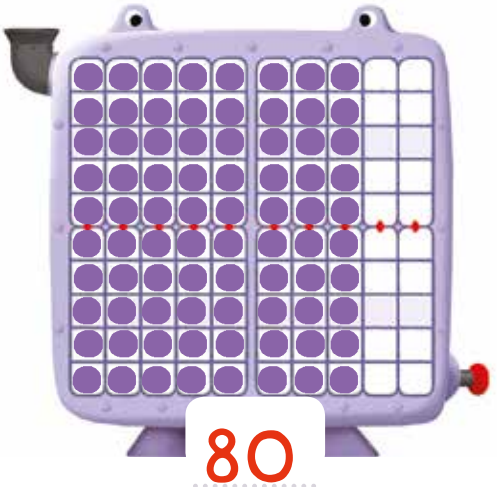


12.2 Ryh-mit-tely ja kym-me-net

A **Las-ke** ja mer-kit-se lu-vut.



10



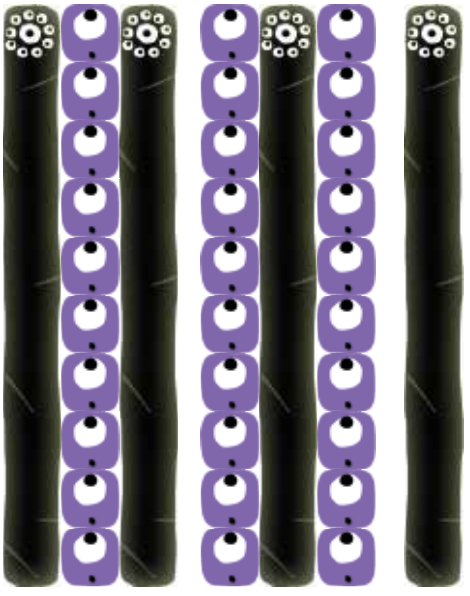
80

20

20

40

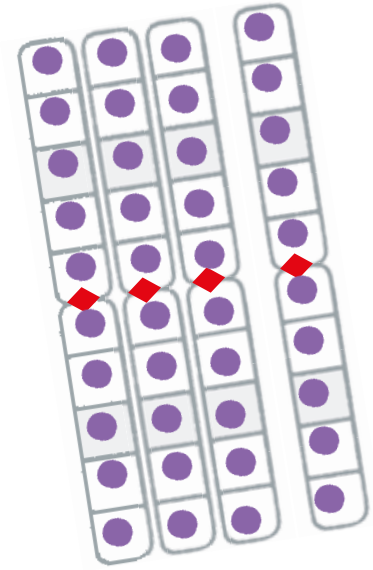
10



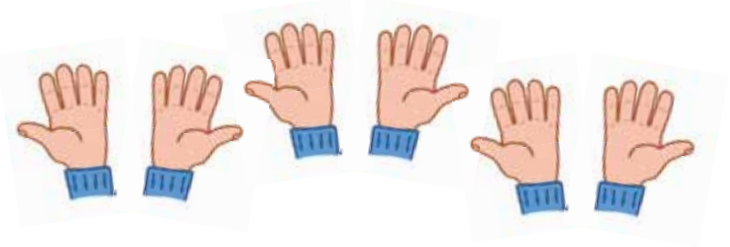
70

Sovelluksen koodi

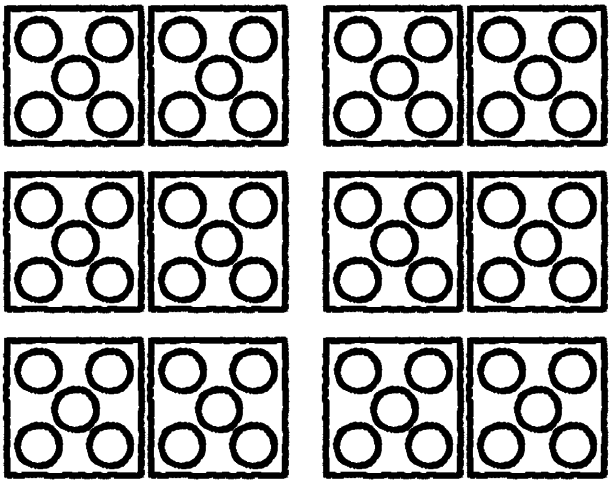
B **Las-ke** ja mer-kit-se lu-vut.



40

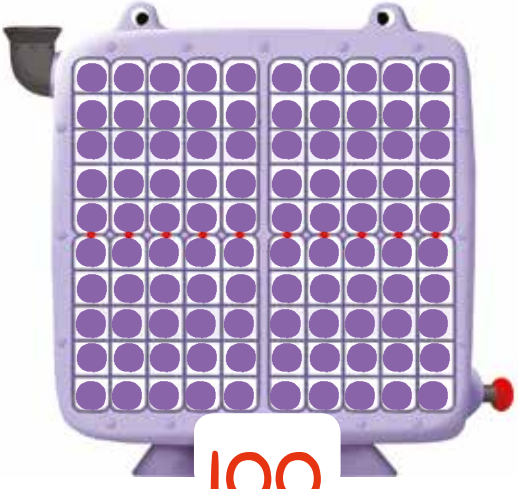


30



60

60

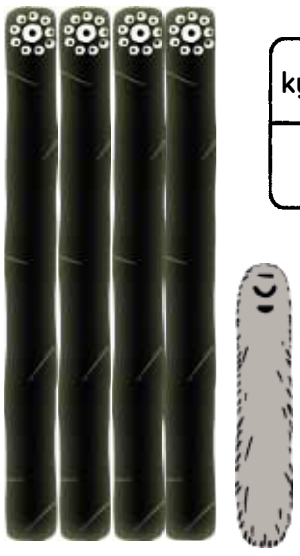


100

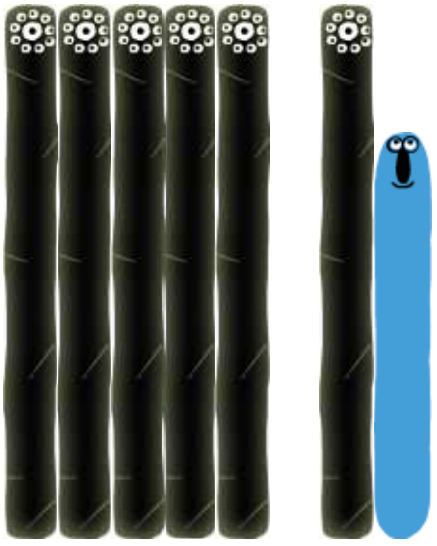
12.2 Ryh-mit-tely ja kym-me-net

C **Las-ke** täy-det kym-me-net ja yk-kö-set.
Täy-den-nä lu-vut tau-luk-koon.

kymmenet	ykköset
3	2



kymmenet	ykköset
4	5

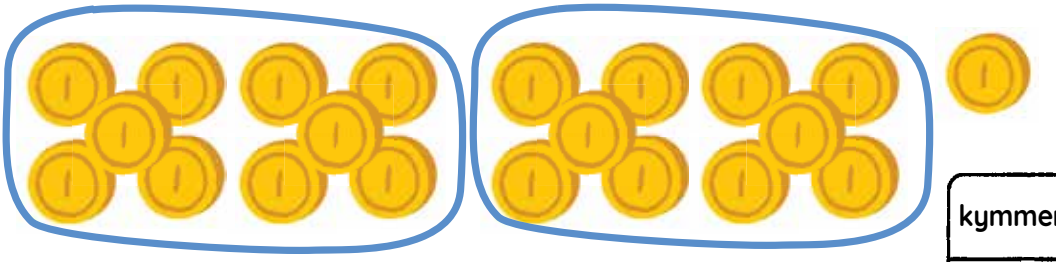


kymmenet	ykköset
6	7

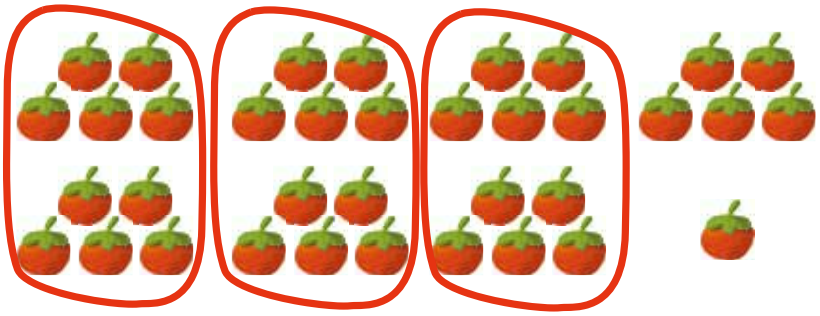
kymmenet	ykköset
2	8

Sovelluksen koodi

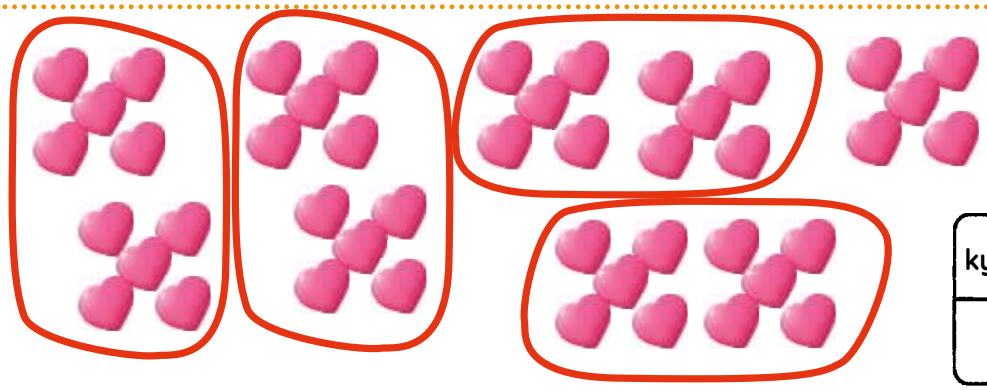
D **Ym-py-röi** 10. Täy-den-nä lu-vut tau-luk-koon.



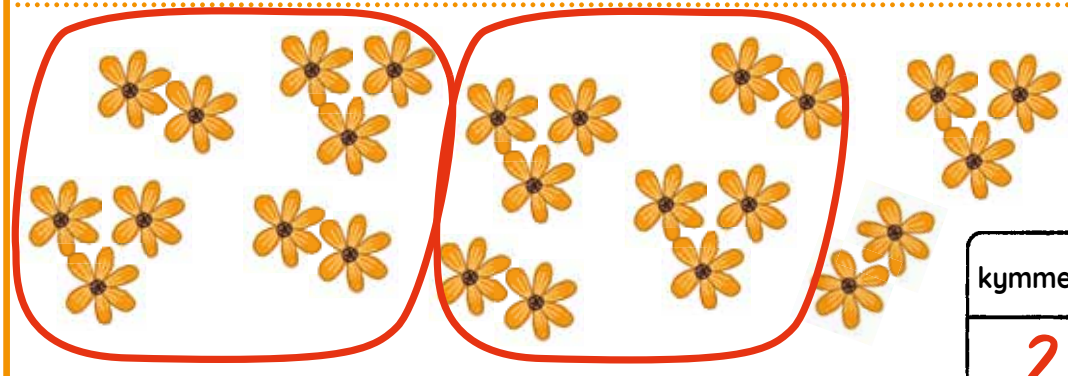
kymmenet	ykköset
2	1



kymmenet	ykköset
3	6



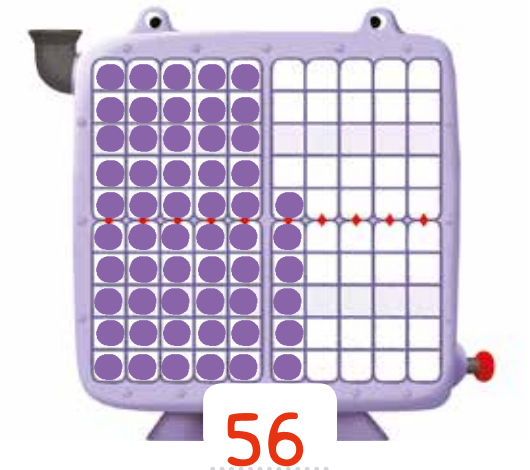
kymmenet	ykköset
4	5



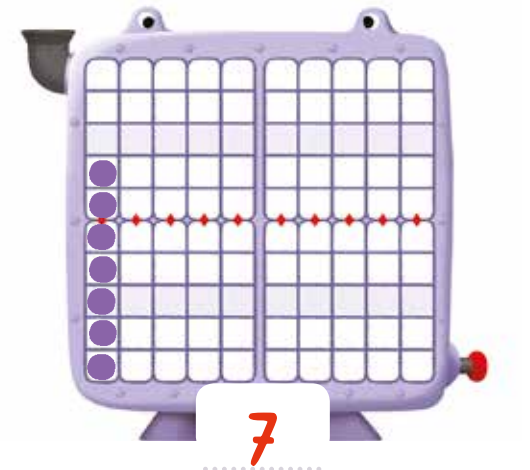
kymmenet	ykköset
2	5

12.3 Lu-vut 0–100

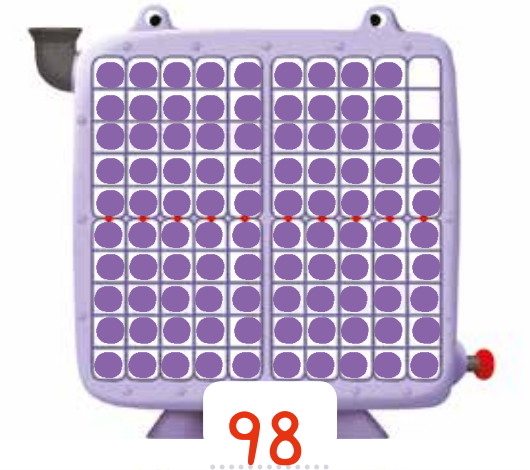
A **Las-ke.** Mer-kit-se lu-ku ko-nee-seen.



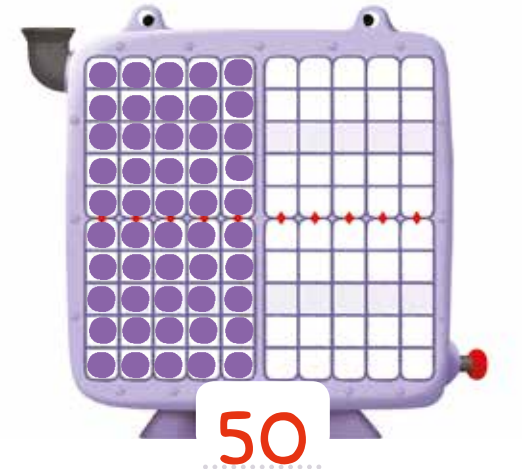
56



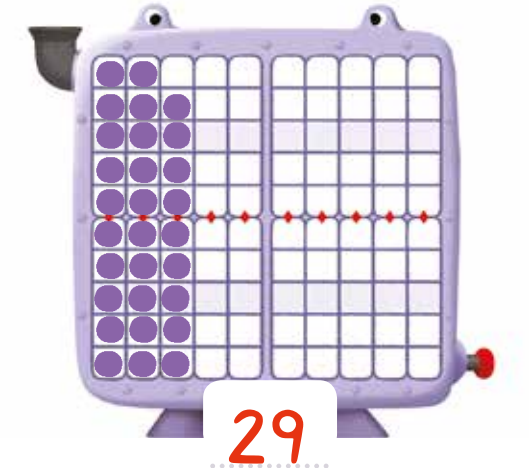
7



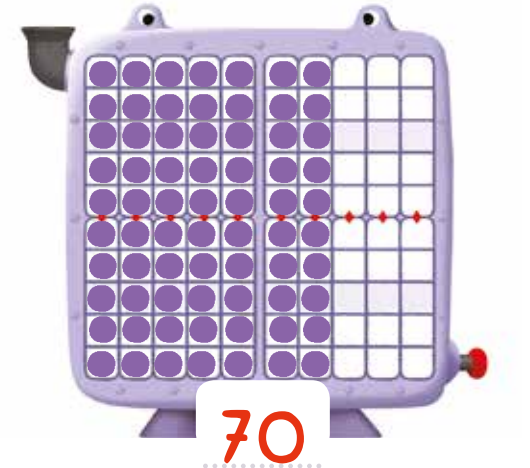
98



50



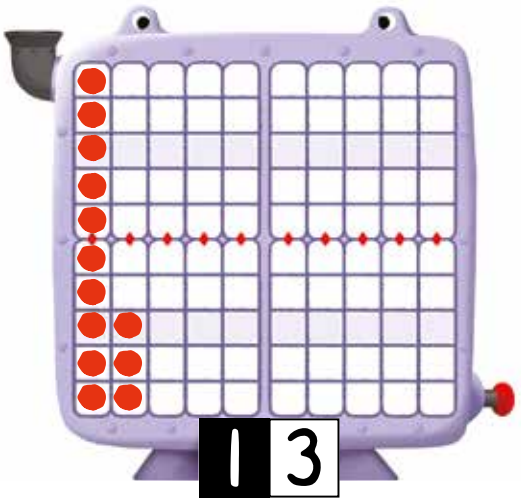
29

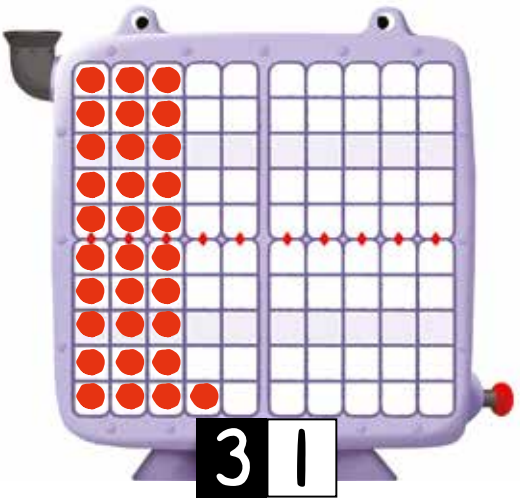


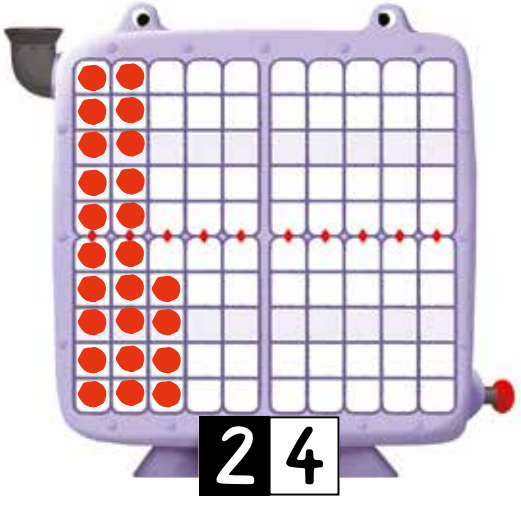
70

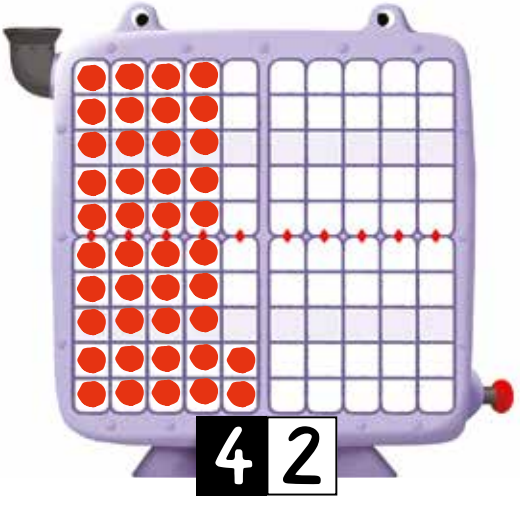
Sovelluksen koodi

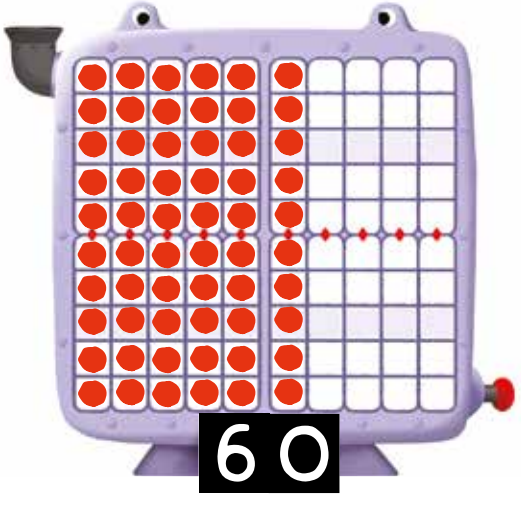
B **Piir-rä** oi-ke-a mää-rä yk-kö-si-ä.

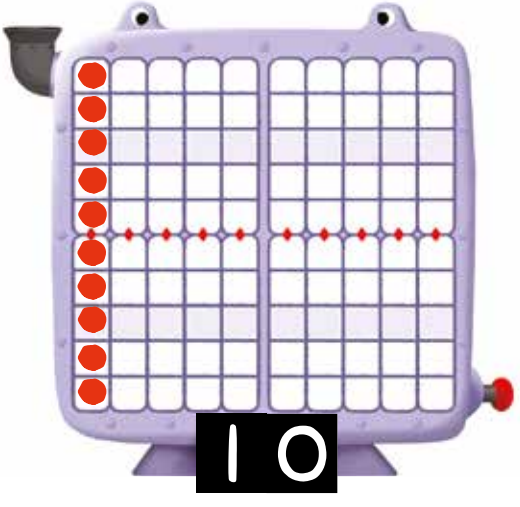










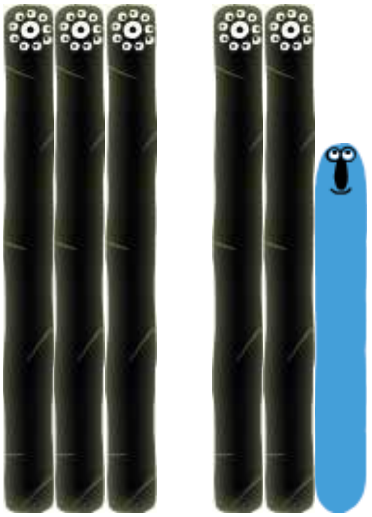


C **Las-ke** ja täy-den-nä lu-ku vii-val-le.

34

21

43



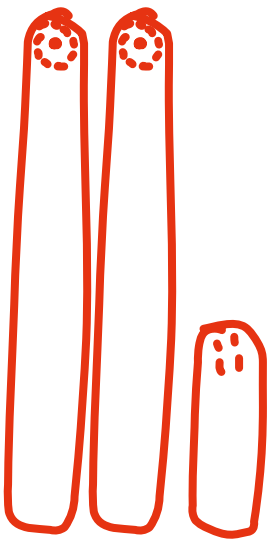
57

19

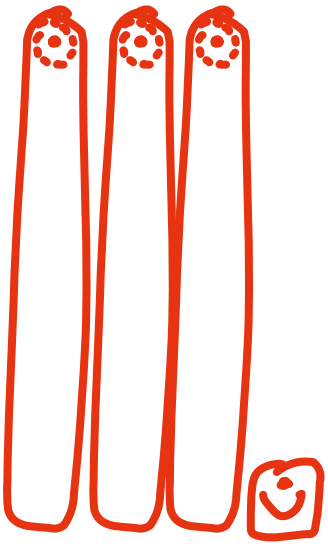
72

Sovelluksen koodi

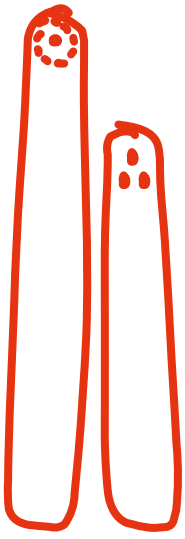
D **Piir-rä** kym-me-net ja yk-kö-set.



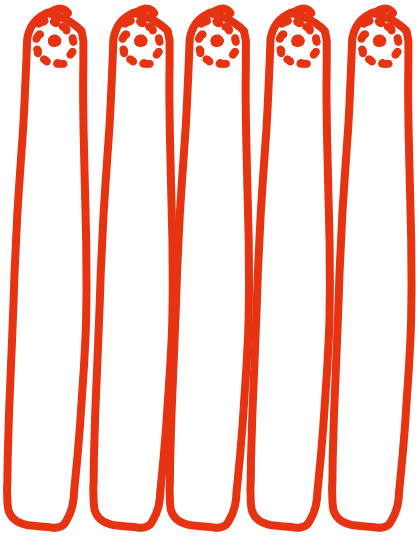
24



31



18

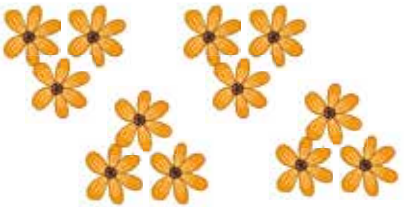


50

12.4 Har-joi-tel-laan

A **Las-ke** ryh-mät ja tee las-ku.

6 + 6 + 6 = 18

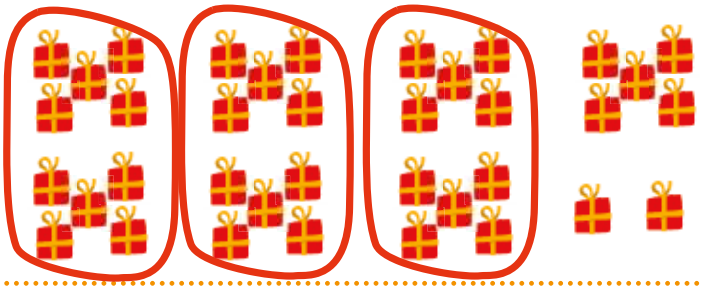


3+3+3+3 = 12

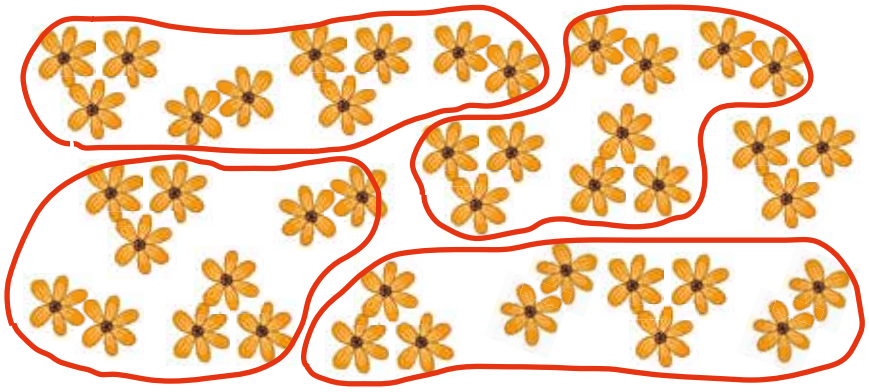
2+2+2+2+2=10

5+5+5 = 15

B **Ym-py-röi** 10. Täy-den-nä lu-vut tau-luk-koon.



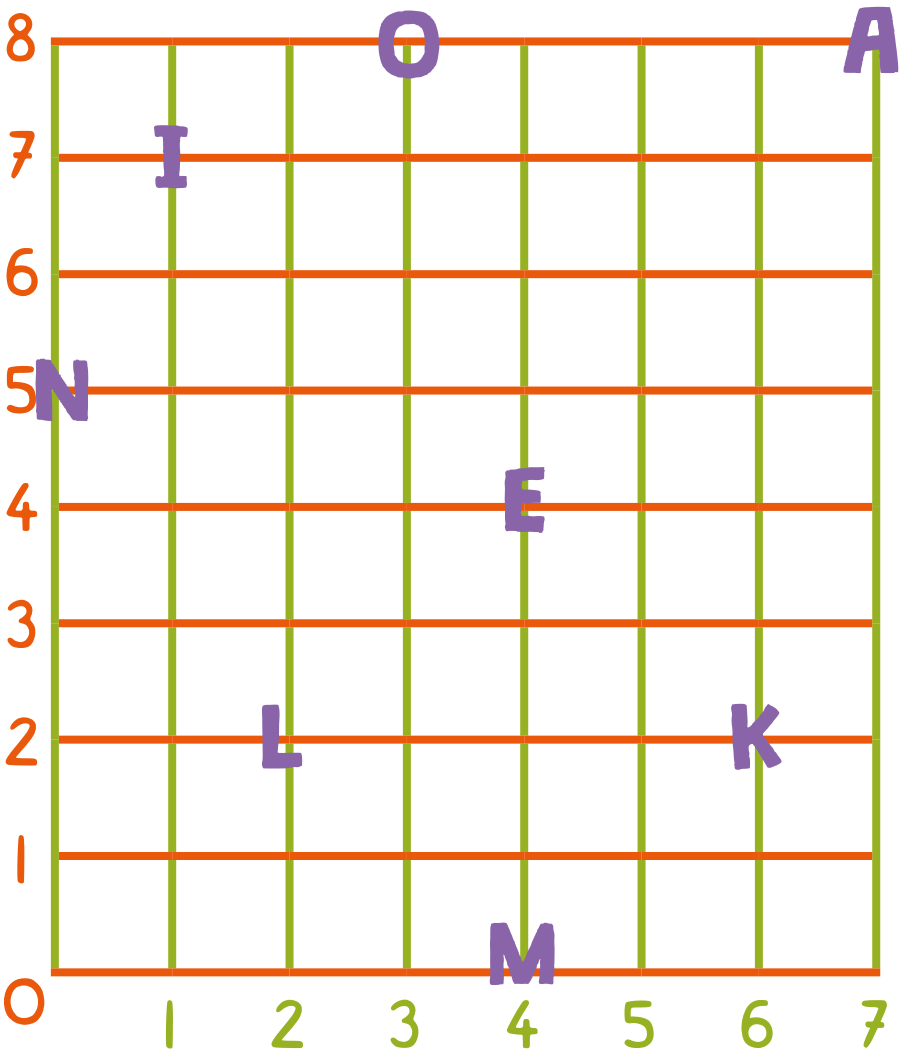
kymmenet	ykköset
3	7



kymmenet	ykköset
4	3

Sovelluksen koodi

C **Rat-kai-se** koo-dat-tu vies-ti.

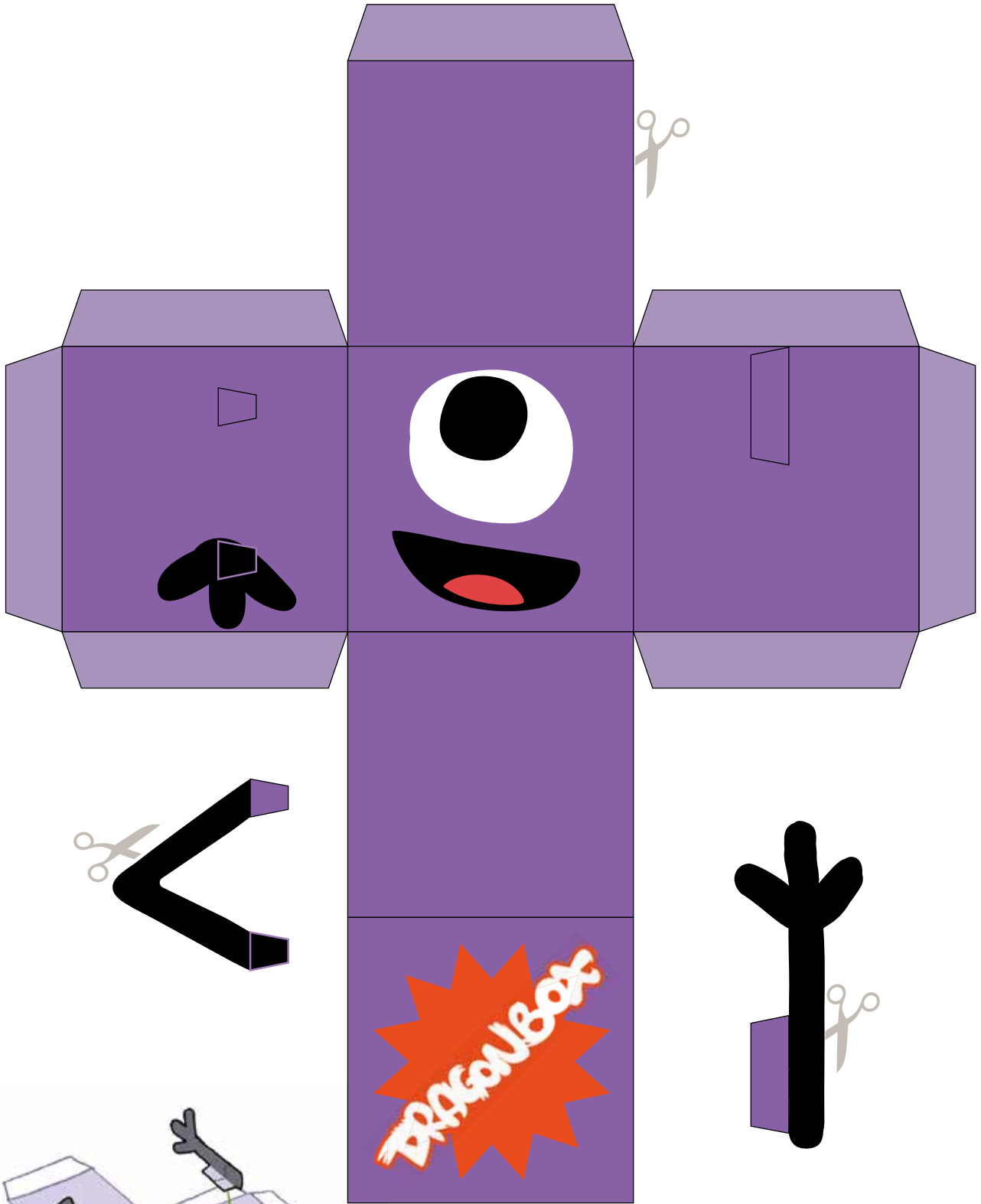


(2,2)	(4,4)	(1,7)	(6,2)	(1,7)
L	E	I	K	I

(0,5)	(3,8)	(3,8)	(4,0)	(4,4)	(1,7)	(2,2)	(2,2)	(7,8)	
N	O	O	M	E	I	L	L	A	!

Osgardista tuli lauhkea kuin lammas.

Ainakin hetkeksi aikaa...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