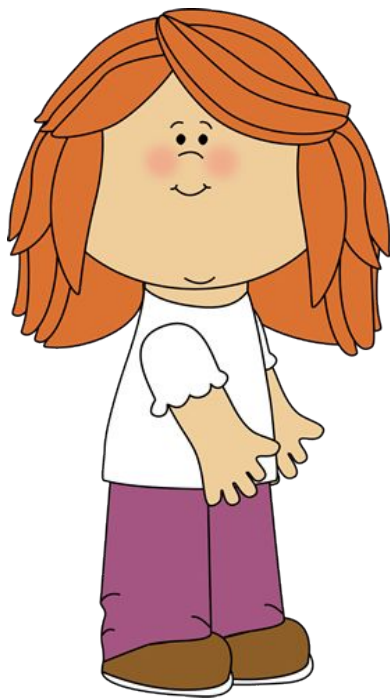
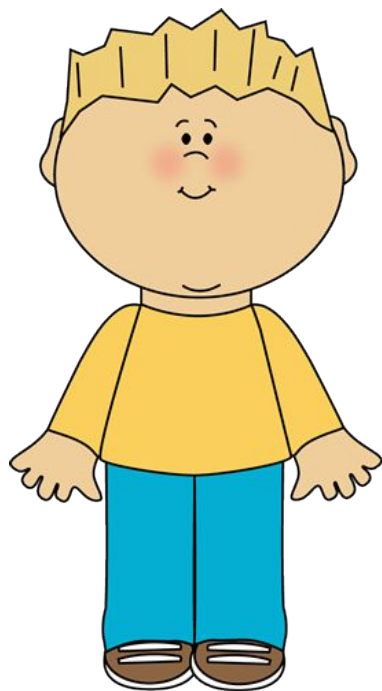


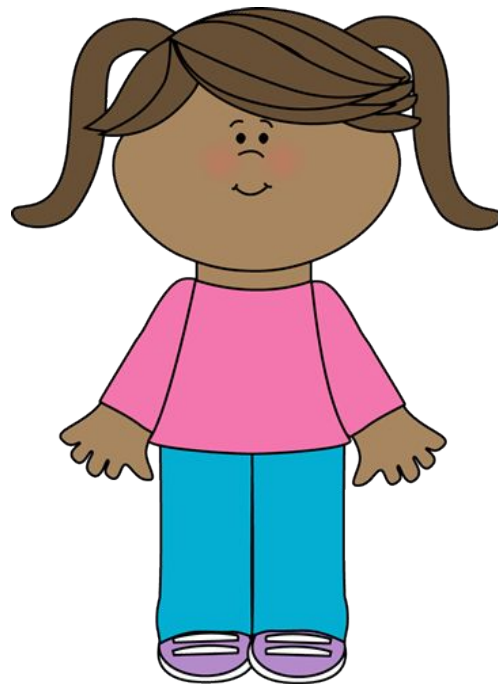
Matematikbørn



Alice



Søren

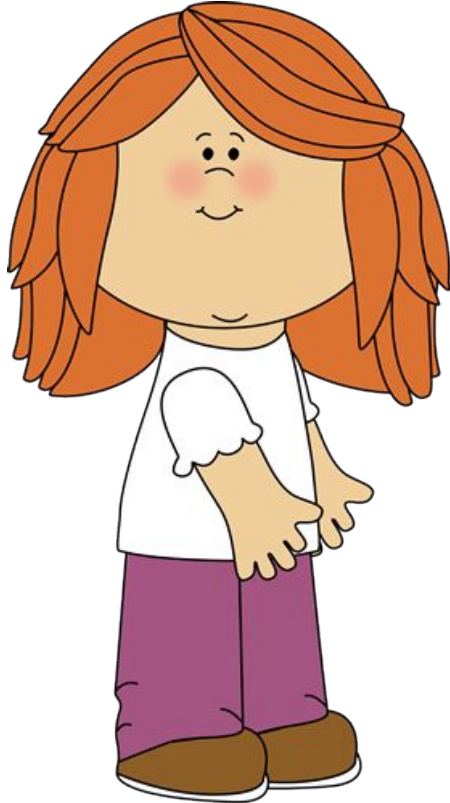


Mia



Dennis

ADDITIONS ALICE



Jeg har her i efteråret leget med ideen om at gøre matematikke sjovere, mere spændende og lettere for mine elever - og derigennem er Alice, Søren, Mia og Dennis blevet til.

Hos mig er børnene/dukkerne både tegnet og (sidenhen blevet) fysiske.

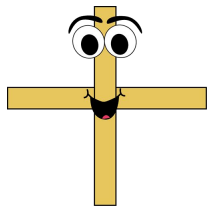
Additions Alice er den første af de 4 dukker.

Hun hjælper mig i matematiktimerne, med at forklare nye metoder mm.

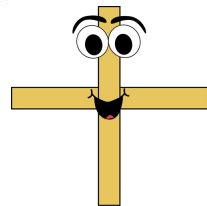
Hun har også til formål at hjælpe de elever der er i matematikvanskeligheder, som jeg underviser i skolens kompetencecenter.

På de næste sider finder du hvad Alice har kreeret indtil nu.





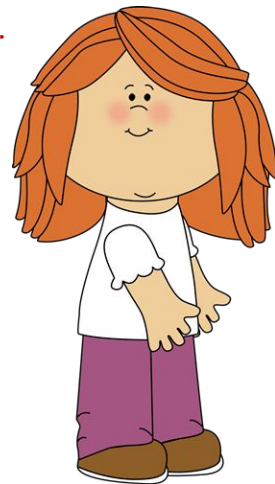
ADDITIONS ALICE



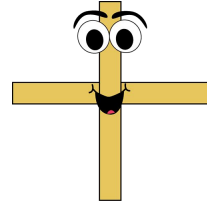
Formål med forløbet er, at eleverne kan anvende flere metoder til at addere flercifrede tal.

Forløbet forudsætter at eleverne:

- kan addere 1-cifrede tal
- har automatiseret 10'er venner (eks. $3+7$)
- har automatiseret talpar (eks. $3+3$)



ADDITIONS ALICE



Forenklede fælles mål efter 3. klasse:

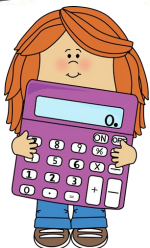
- Tal og algebra
 - Regnestrategier - fase 2
 - Eleven kan udvikle metoder til addition og subtraktion med naturlige tal
 - Eleven har viden om strategier til hovedregning, overslagsregning samt regning med skriftlige notater og digitale værktøjer



Læringsmål:

- Jeg kan kløve tal til addition
- Jeg kan addere tal på den åbne tallinje
- Jeg kan addere ved hjælp af taltavle





Alice regner addition



Alice er vild med 10'er venner - eks. $3+7$.. Hun ved nemlig at hun med hjælp fra sine venner kan addere rigtig mange regnestykker.

Udover 10'er venner kan Alice også noget andet udenad. Nemlig pluspar, som er når man lægger tal sammen der er ens - eks. $3+3$

Nu da Alice kan disse 2 ting udenad, så kan hun nemlig bruge dem til at regne med store tal.

Hvis Alice skal regne **$24+37$** , kan hun gøre det på mange måder.

Alice flyver i taltavle

Da Alice skulle starte med at addere 2 cifrede tal, brugte hun gerne taltavlen. Den havde hun set mange gange før, og den var nem at tælle på.

Dog lærte hun en metode, som gjorde det lidt hurtigere at regne.

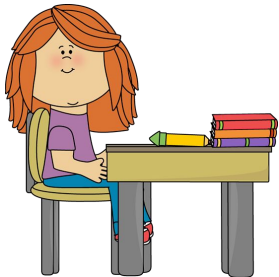
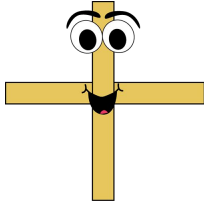
45+37 blev nu lavet om. Hun lettede fra 45 og fløj så enere vandret og derefter tiere lodret.

Taltavle

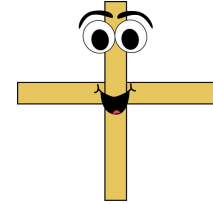
91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10



Additions Alice flyver i taltavlen



91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10





Alice hopper på tallinje



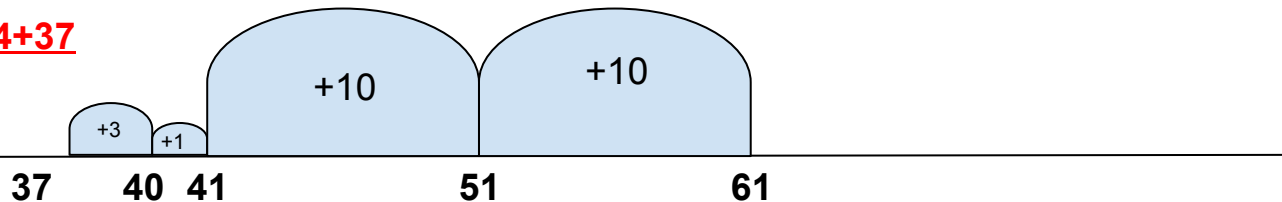
Da Alice var yngre brugte hun tallinjen rigtig meget til at tælle på, så hun kunne lære hvordan tallene så ud.

Alice bruger stadig tallinjen - men nu er der bare ingen tal på!

Hvis Alice skal addere stykket **$24+37$** på en tallinje, ville hun gøre det således:

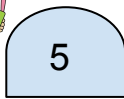
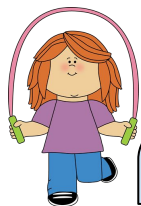


$24+37$



Additions Alice hopper på tallinje

$$45+37$$

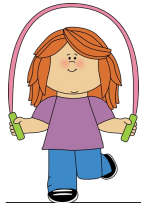


45

50

52

82



+



+

Additions Alice hopper på tallinje



_____ + _____



_____ + _____



_____ + _____



_____ + _____



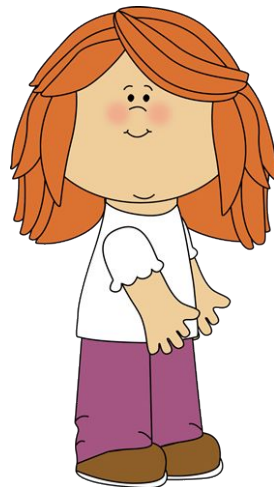
_____ + _____



_____ + _____



Alice kløver tal



$$26+7$$

Når Alice skal regne dette, tænker hun på sine 10'er venner. Altså:

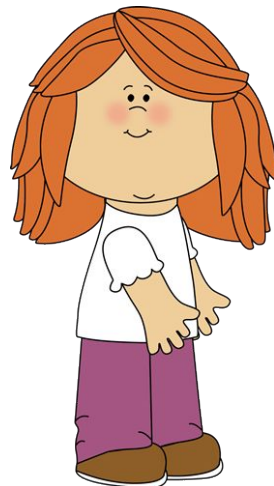
$$\begin{array}{r} 26 \quad + \quad 7 \\ \quad \quad / \quad \backslash \\ \quad \quad 4 \quad 3 \end{array}$$

Alice kløver derpå eneren og lægger derefter 4 til 26, på den måde laver Alice et nemmere regnestykke for sig selv.

$$26+4+3=33$$



Alice kløver tal



$$24+37$$

Når Alice skal regne dette, vil hun dele tallet i enere og tiere. Altså:

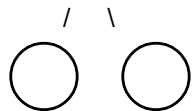
$$\begin{array}{r} 24 \\ / \quad \backslash \\ 20 \quad 4 \end{array} \quad + \quad \begin{array}{r} 37 \\ / \quad \backslash \\ 30 \quad 7 \end{array}$$

Alice bruger derpå sine regnestrategier til at addere enerne - i dette tilfælde 10'er venner $7+4=7+3+1=11$

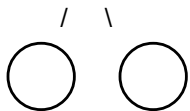
Bagefter 10'erne
 $20+30+11=61$

Additions Alice kløver tal 1

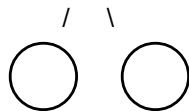
$$45 + 9 = \square$$



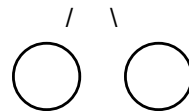
$$37 + 5 = \square$$



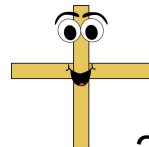
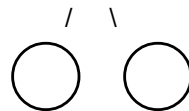
$$23 + 8 = \square$$



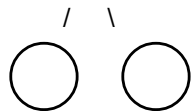
$$49 + 8 = \square$$



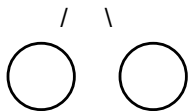
$$85 + 6 = \square$$



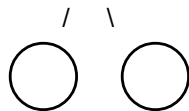
$$32 + 9 = \square$$



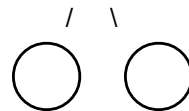
$$56 + 6 = \square$$



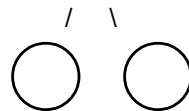
$$82 + 9 = \square$$



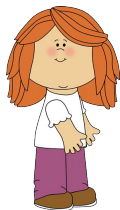
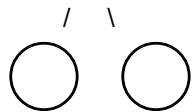
$$63 + 8 = \square$$



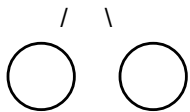
$$27 + 9 = \square$$



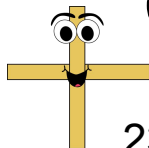
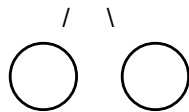
$$72 + 9 = \square$$



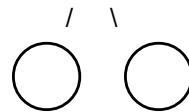
$$89 + 3 = \square$$



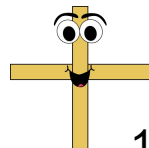
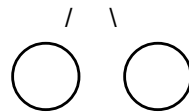
$$23 + 8 = \square$$



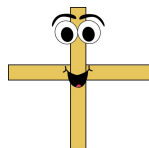
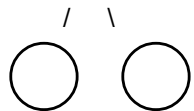
$$74 + 7 = \square$$



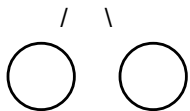
$$58 + 9 = \square$$



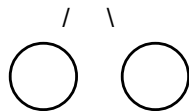
$$64 + 7 = \square$$



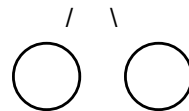
$$23 + 8 = \square$$



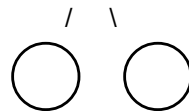
$$55 + 7 = \square$$



$$19 + 6 = \square$$



$$72 + 9 = \square$$



Additions Alice kløver tal 2

$$\begin{array}{r} 24 \\ / \quad \backslash \end{array} + \begin{array}{r} 73 \\ / \quad \backslash \end{array} = \square$$



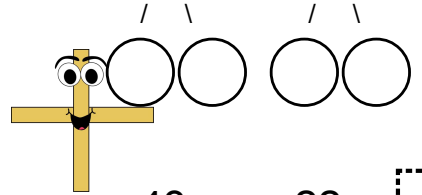
$$\begin{array}{r} 42 \\ / \quad \backslash \end{array} + \begin{array}{r} 37 \\ / \quad \backslash \end{array} = \square$$



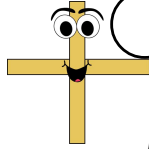
$$\begin{array}{r} 36 \\ / \quad \backslash \end{array} + \begin{array}{r} 28 \\ / \quad \backslash \end{array} = \square$$



$$\begin{array}{r} 82 \\ / \quad \backslash \end{array} + \begin{array}{r} 19 \\ / \quad \backslash \end{array} = \square$$



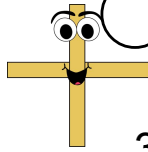
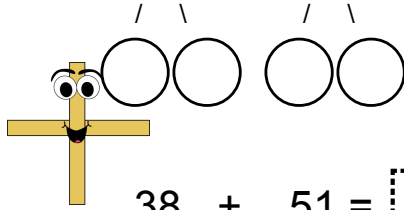
$$\begin{array}{r} 33 \\ / \quad \backslash \end{array} + \begin{array}{r} 46 \\ / \quad \backslash \end{array} = \square$$



$$\begin{array}{r} 33 \\ / \quad \backslash \end{array} + \begin{array}{r} 64 \\ / \quad \backslash \end{array} = \square$$



$$\begin{array}{r} 26 \\ / \quad \backslash \end{array} + \begin{array}{r} 48 \\ / \quad \backslash \end{array} = \square$$



$$\begin{array}{r} 43 \\ / \quad \backslash \end{array} + \begin{array}{r} 22 \\ / \quad \backslash \end{array} = \square$$



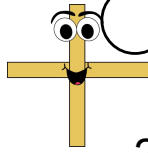
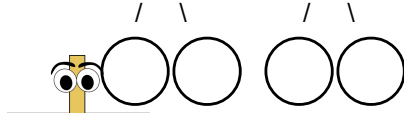
$$\begin{array}{r} 28 \\ / \quad \backslash \end{array} + \begin{array}{r} 29 \\ / \quad \backslash \end{array} = \square$$



$$\begin{array}{r} 59 \\ / \quad \backslash \end{array} + \begin{array}{r} 37 \\ / \quad \backslash \end{array} = \square$$



$$\begin{array}{r} 38 \\ / \quad \backslash \end{array} + \begin{array}{r} 51 \\ / \quad \backslash \end{array} = \square$$



$$\begin{array}{r} 12 \\ / \quad \backslash \end{array} + \begin{array}{r} 21 \\ / \quad \backslash \end{array} = \square$$



$$\begin{array}{r} 45 \\ / \quad \backslash \end{array} + \begin{array}{r} 15 \\ / \quad \backslash \end{array} = \square$$



$$\begin{array}{r} 54 \\ / \quad \backslash \end{array} + \begin{array}{r} 41 \\ / \quad \backslash \end{array} = \square$$

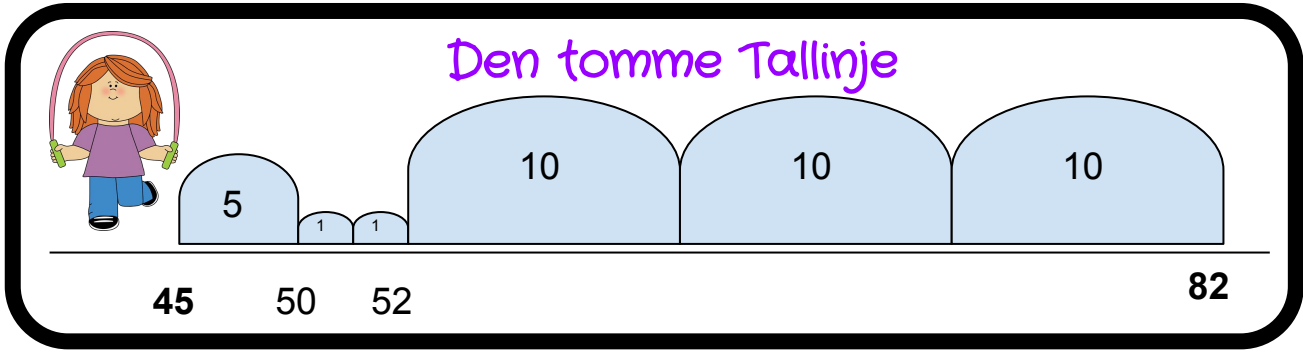


$$\begin{array}{r} 24 \\ / \quad \backslash \end{array} + \begin{array}{r} 39 \\ / \quad \backslash \end{array} = \square$$



$$\begin{array}{r} 61 \\ / \quad \backslash \end{array} + \begin{array}{r} 37 \\ / \quad \backslash \end{array} = \square$$





Talklønning

$$45 + 37 = 82$$

$\begin{array}{r} 45 \\ / \quad \backslash \\ 40 \quad 5 \end{array}$

$\begin{array}{r} 37 \\ / \quad \backslash \\ 30 \quad 7 \end{array}$

$5+7=12$
 $40+30+12=82$

45 + 37

Taltavle

91	92	93	94	95	96	97	98	99	100
81	82	83	84	85	86	87	88	89	90
71	72	73	74	75	76	77	78	79	80
61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60
41	42	43	44	45	46	47	48	49	50
31	32	33	34	35	36	37	38	39	40
21	22	23	24	25	26	27	28	29	30
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10



Tak fordi du har downloadet mit materiale.

Har du spørgsmål ang. organiseringen af undervisningen i materialet - eller andet, kan jeg kontaktes på Karina_kp@hotmail.com

Alice er tegnet af [Laura Strickland](https://www.mycutegraphics.com/) fra <https://www.mycutegraphics.com/>
Her er alle tegninger og rammer hentet fra.

Da materialet er udarbejdet i Google Sheets, er det vigtigt at printerindstillingerne er sat op til at tilpasse PDF til siden.

God fornøjelse
Hilsen Karina Pihl