# Varied Fluency <br> Step 8: Add and Subtract Capacities 

## National Curriculum Objectives:

Mathematics Year 3: (3M9d) Add and subtract volume/ capacity (I/ ml)

## Differentiation:

Developing Questions to support adding and subtracting capacities of 2 items, using various representations. Measures given in both ml and L , with no conversions or exchanges within questions; multiples of 100.
Expected Questions to support adding and subtracting capacities of up to 3 items, using various representations. Measures given in both ml and L , with some exchanging and crossing tens; multiples of 50 and 100 where some measures are represented as fractions, for example $2 \mathbf{1 / 2 L}$.
Greater Depth Questions to support adding and subtracting capacities of up to 3 items, using various representations. Measures given in both ml and L , of any number, with exchanging and crossing tens where some measures are represented as fractions, for example 2 1/2L.

## More Year 3 Mass and Capacity resources.

Did you like this resource? Don't forget to review it on our website.

1a. Draw lines between these boxes to make the calculations correct.

| Start |
| :---: |
| $1 L$ and 300 ml |
| 2 L and 800 ml |
| 500 ml |


| + or - |
| :---: |
| +400 ml |
| +2 L and 300 ml |
| $-1 L$ and 600 ml |


| Equals |
| :---: |
| 1 L and 200 ml |
| 2 L and 800 ml |
| 1 L and 700 ml |

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2a. Complete the part whole model.


1b. Draw lines between these boxes to make the calculations correct.

| Start | + or - | Equals |
| :---: | :---: | :---: |
| 800ml | - 1L and 500ml | 1 L and 900 ml |
| 3 L and 400ml | - 1L and 100ml | 1 L and 200 ml |
| 2L and 700ml | + 1L and 100 ml | 2 L and 300 ml |

2b. Complete the part whole model.


3a. Find the difference between the containers:

|  | Container | Capacity |
| :---: | :---: | :---: |
|  | A | 1 L and 500 ml |
|  | B | 1 L and 900 ml |
|  | C | 1 L and 400 ml |

4a. Which two of these containers would you need to have a total of 3L and 700 ml ?

| 1 L and |  |  |
| :---: | :---: | :---: |
| 300 ml | 1 L and <br> 200 ml | 2 L and <br> 400 ml |

3b. Find the difference between the containers:

|  | Container | Capacity |
| :---: | :---: | :---: |
| A and B | A | 2L and 600 ml |
| A and C | B | 1L and 500 ml |
|  | C | 2L and 300 ml |

5a. Draw lines between these boxes to make the calculations correct.

| Start |
| :---: |
| 3 L and 400 ml |
| 8 L and 900 ml |
| 4 L and 400 ml |


| + or - |
| :---: |
| +2 L and 700 ml |
| -2 L and 250 ml |
| -2 L and 500 ml |


| Equals |
| :---: |
| 6 L and 400 ml |
| 6 L and 100 ml |
| 2 L and 150 ml |

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6a. Complete the part whole model.


7a. Find the difference between the containers:

|  | Container | Capacity |
| :---: | :---: | :---: |
| A and C | A | 4L and 500 ml |
| B and C | B | 5L and 700 ml |
|  | C | 2L and 950 ml |

8a. Which three of these containers would you need to have a total of $9 \frac{1}{2} \mathrm{~L}$ ?


5b. Draw lines between these boxes to make the calculations correct.

| Start | + or - | Equals |
| :---: | :---: | :---: |
| 1 L and 900 ml | + 1 L and 600 ml | 2 L and 900 ml |
| 5L and 450ml | - 2 L and 550 ml | 3 L and 500 ml |
| 2L and 850 ml | + 2 L and 100 ml | 4L and 950 ml |

6b. Complete the part whole model.


7b. Find the difference between the containers:

|  | Container | Capacity |
| :---: | :---: | :---: |
| A and B | A | 7L and 600 ml |
| B and C | B | 3L and 500 ml |
|  | C | 2L and 700 ml |

8b. Which three of these containers would you need to have a total of $8 \frac{1}{2} \mathrm{~L}$ ?


## Add and Subtract Capacities

Add and Subtract Capacities
9a. Draw lines between these boxes to make the calculations correct.

| Start | + or - | Equals |
| :---: | :---: | :---: |
| 5 L and 150 ml | -4L and 350ml | 7 L and 495 ml |
| 6 L and 350 ml | + 2 L and 345 ml | 7 L and 000 ml |
| 4 L and 475 ml | + 2 L and 525 ml | 4 L and 500 ml |
| 6 L and 875 ml | - 1 L and 850 ml | 2 L and 525 ml |
| $\mathfrak{G 0}$ |  | VF |

10a. Complete the part whole model.

11a. Find the difference between the containers:

|  | Container | Capacity |
| :---: | :---: | :---: |
| A and C | A | 2L and 350 ml |
| B and C | B | 6L and 950 ml |
|  | C | 3L and 200 ml |

12a. Which three of these containers would you need to have a total of 11L?


| $3 \frac{1}{2} \mathrm{~L}$ | $2 \frac{1}{4} \mathrm{~L}$ | $1 \frac{3}{4} \mathrm{~L}$ | $5 \frac{3}{4} \mathrm{~L}$ |
| :--- | :--- | :--- | :--- |

9b. Draw lines between these boxes to make the calculations correct.

| Start | + or - | Equals |
| :---: | :---: | :---: |
| 5 L and 500 ml | - 2 L and 350 ml | 7 L and 970 ml |
| 6L and 250ml | + 2 L and 500 ml | 7 L and 75 ml |
| 4L and 575 ml | - 5L and 450ml | 4L and 450 ml |
| 9 L and 900 ml | + 1L and 720 ml | 3 L and 150 ml |
| $\widehat{G D}$ |  | VF |

10b. Complete the part whole model.


11b. Find the difference between the containers:

|  | Container | Capacity |
| :---: | :---: | :---: |
| A and B | A | 7L and 900 ml |
| B and C | B | 3L and 50 ml |
|  | C | 2L and 800 ml |

12b. Which three of these containers would you need to have a total of 14L?

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## Varied Fluency

Add and Subtract Capacities

## Developing

1 a. 1 L and $300 \mathrm{ml}+400 \mathrm{ml}=1 \mathrm{~L}$ and 700 ml ; 2 L and $800 \mathrm{ml}-1 \mathrm{~L}$ and $600 \mathrm{ml}=1 \mathrm{~L}$ and $200 \mathrm{ml} ; 500 \mathrm{ml}+2 \mathrm{~L}$ and $300 \mathrm{ml}=2 \mathrm{~L}$ and 800 ml
2 a . 2 L and 900 ml
3 a . A and $\mathrm{C}=100 \mathrm{ml}, B$ and $\mathrm{C}=500 \mathrm{ml}$ 4a. A and C

## Expected

5 a .3 L and $400 \mathrm{ml}+2 \mathrm{~L}$ and $700 \mathrm{ml}=6 \mathrm{~L}$ and 100 ml
8 L and $900 \mathrm{ml}-2 \mathrm{~L}$ and $500 \mathrm{ml}=6 \mathrm{~L}$ and 400 ml
4 L and $400 \mathrm{ml}-2 \mathrm{~L}$ and $250 \mathrm{ml}=2 \mathrm{~L}$ and 150 ml
$6 \mathrm{a} . \mathrm{A}=8 \mathrm{~L}$ and 300 ml
7 a . A and $\mathrm{C}=1 \mathrm{~L}$ and $550 \mathrm{ml}, \mathrm{B}$ and $C=2 \mathrm{~L}$ and 750 ml
8a. A, C and D

## Greater Depth

9 a .5 L and $150 \mathrm{ml}+2 \mathrm{~L}$ and $345 \mathrm{ml}=7 \mathrm{~L}$ and 495 ml
6 L and $350 \mathrm{ml}-1 \mathrm{~L}$ and $850 \mathrm{ml}=4 \mathrm{~L}$ and 500 ml
4 L and $475 \mathrm{ml}+2 \mathrm{~L}$ and $525 \mathrm{ml}=7 \mathrm{~L}$ and 000 ml
6 L and $875 \mathrm{ml}-4 \mathrm{~L}$ and $350 \mathrm{ml}=2 \mathrm{~L}$ and 525 ml
10a. 10L and 300 ml
11 a . A and $\mathrm{C}=850 \mathrm{ml}$,
$B$ and $C=3 \mathrm{~L}$ and 750 ml
12a. A, C and D

## Developing

1b. $800 \mathrm{ml}+1 \mathrm{~L}$ and $100 \mathrm{ml}=1 \mathrm{~L}$ and 900 ml 3 L and $400 \mathrm{ml}-1 \mathrm{~L}$ and $100 \mathrm{ml}=2 \mathrm{~L}$ and 300 ml ; $2 \mathrm{~L} 700 \mathrm{ml}-1 \mathrm{~L}$ and $500 \mathrm{ml}=1 \mathrm{~L}$ and 200 ml
2b. 2 L and 100 ml
3b. A and $\mathrm{B}=1 \mathrm{~L}$ and $100 \mathrm{ml}, \mathrm{A}$ and $\mathrm{C}=$ 300 ml

4b. B and C

## Expected

5b. 1 L and $900 \mathrm{ml}+1 \mathrm{~L}$ and $600 \mathrm{ml}=3 \mathrm{~L}$ and 500 ml
5 L and $450 \mathrm{ml}-2 \mathrm{~L}$ and $550 \mathrm{ml}=2 \mathrm{~L}$ and 900 ml
2 L and $850 \mathrm{ml}+2 \mathrm{~L}$ and $100 \mathrm{ml}=4 \mathrm{~L}$ and 950 ml
6b. $\mathrm{A}=1 \mathrm{~L}$ and 900 ml
7b. 7 b . $A$ and $B=4 \mathrm{~L}$ and $100 \mathrm{ml}, B$ and C $=800 \mathrm{ml}$
8b. A, B and D

## Greater Depth

9 b. 5 L and $500 \mathrm{ml}-2 \mathrm{~L}$ and $350 \mathrm{ml}=3 \mathrm{~L}$ and 150 ml
6 L and $250 \mathrm{ml}+1 \mathrm{~L}$ and $720 \mathrm{ml}=7 \mathrm{~L}$ and 970 ml
4 L and $575 \mathrm{ml}+2 \mathrm{~L}$ and $500 \mathrm{ml}=7 \mathrm{~L}$ and 75 ml
9 L and $900 \mathrm{ml}-5 \mathrm{~L}$ and $450 \mathrm{ml}=4 \mathrm{~L}$ and 450 ml
10b. 9 L and 350 ml
11b. $A$ and $B=4 L$ and 850 ml ,
$B$ and $C=250 \mathrm{ml}$
12b. A, B and D

