

Varied Fluency

Step 4: Add and Subtract Mass

National Curriculum Objectives:

Mathematics Year 3: (3M1b) [Compare mass \(kg/g\)](#)

Mathematics Year 3: (3M2b) [Measure mass \(kg/g\)](#)

Differentiation:

Developing Questions to support adding and subtracting masses of 2 items, using various representations. Measures given in both kg and g, with no conversions within questions; multiples of 100.

Expected Questions to support adding and subtracting masses of up to 3 items, using various representations. Measures given in both kg and g, with some exchanging and crossing tens; multiples of 5 where some measures are represented as fractions i.e. $2\frac{1}{2}$ kg.

Greater Depth Questions to support adding and subtracting masses of up to 3 items, using various representations. Measures given in both kg and g of any number, with exchanging and crossing tens where some measures are represented as fractions i.e. $2\frac{1}{2}$ kg.

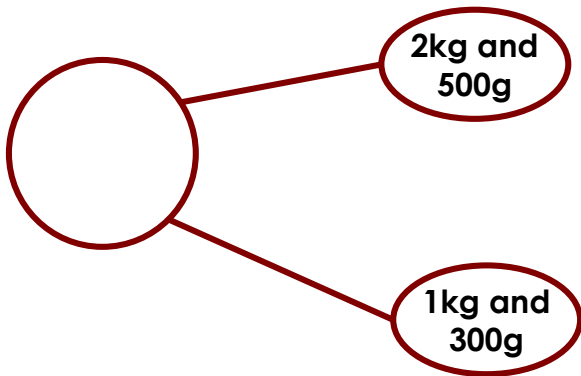
More [Year 3 Mass and Capacity](#) resources.

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Add and Subtract Mass

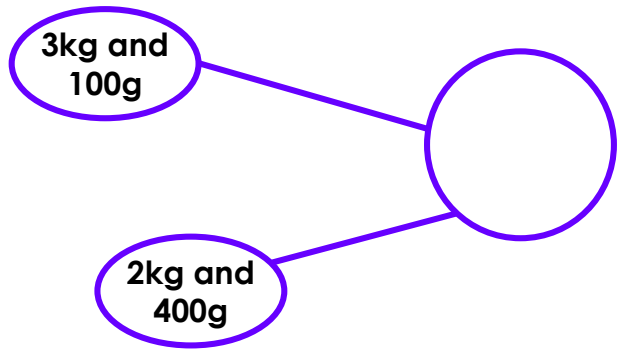
Add and Subtract Mass

1a. Complete the part-whole model.



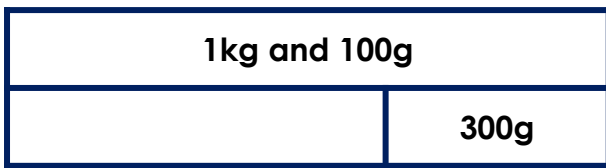
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1b. Complete the part-whole model.



VF

2a. Complete the bar model.



VF

2b. Complete the bar model.



VF

3a. Use place value counters to find the difference between 3kg and 300g and 1kg and 800g.

Thousands	Hundreds	Tens



VF

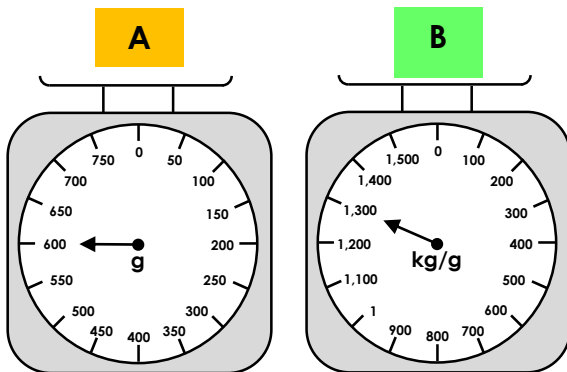
3b. Use place value counters to find the difference between 3kg and 400g and 1kg and 700g.

Thousands	Hundreds	Tens



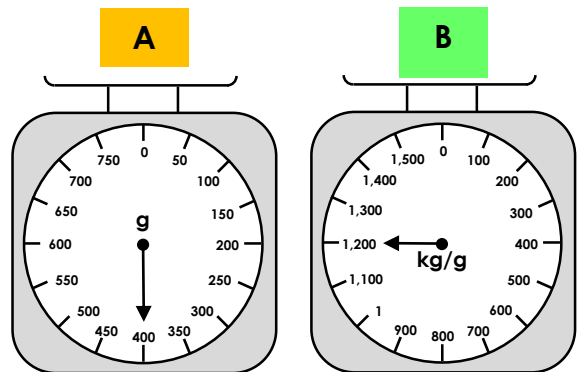
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4a. Find the total mass of these items.



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4b. Find the total mass of these items.

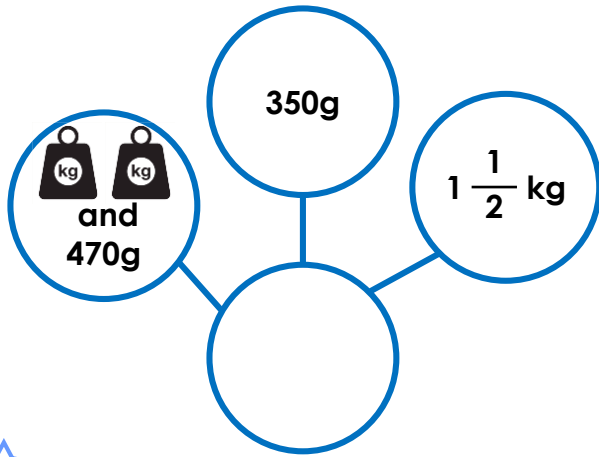


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Add and Subtract Mass

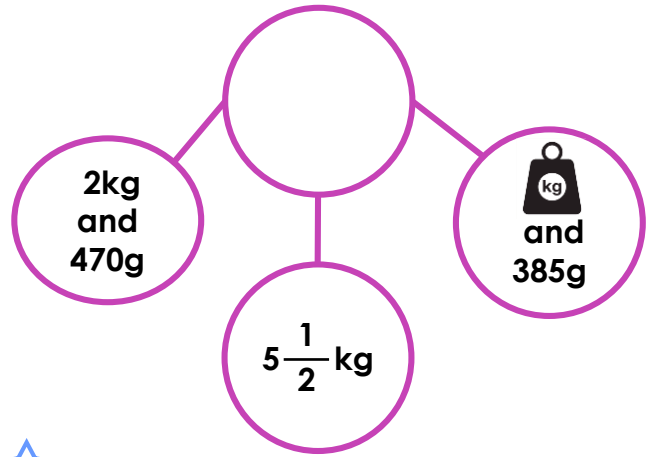
Add and Subtract Mass

5a. Complete the part-whole model.



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5b. Complete the part-whole model.



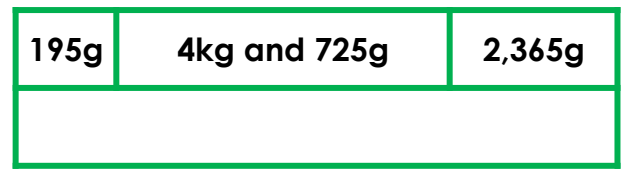
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6a. Complete the bar model.



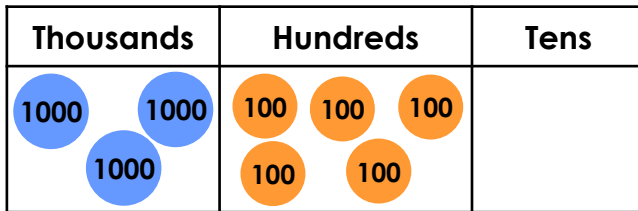
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6b. Complete the bar model.



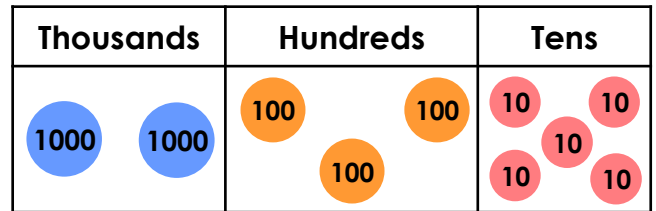
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7a. Use place value counters to find the difference between $3\frac{1}{2}$ kg and 1kg 150g.



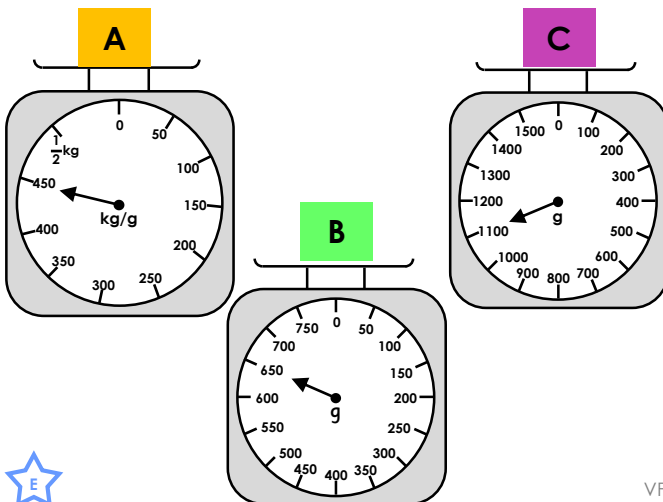
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7b. Use place value counters to find the difference between 2kg and 350g and 1kg and 500g.



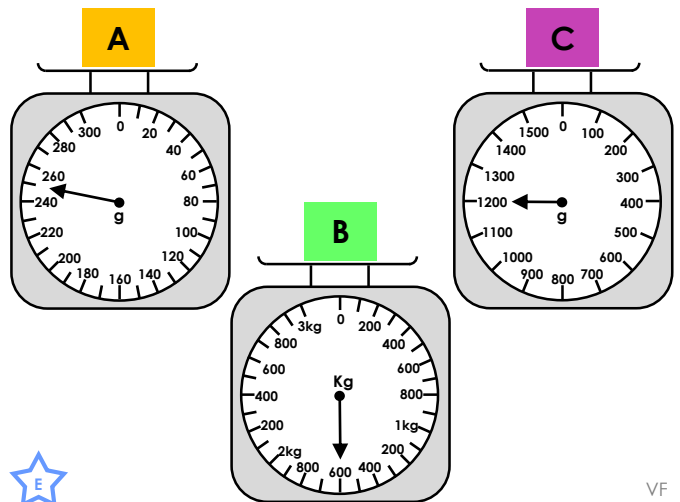
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8a. Find the total mass of these items.



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8b. Find the total mass of these items.

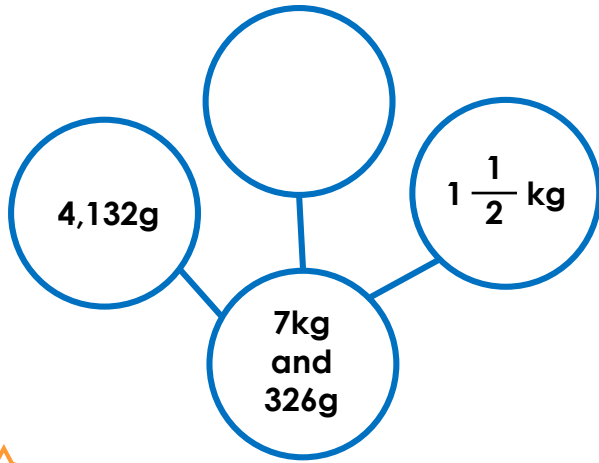


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Add and Subtract Mass

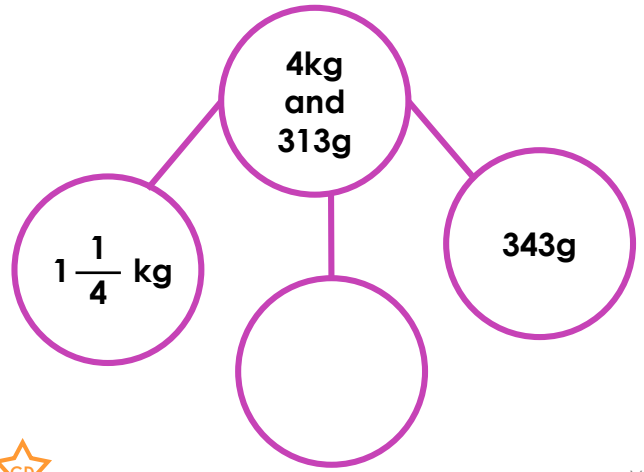
Add and Subtract Mass

9a. Complete the part-whole model.



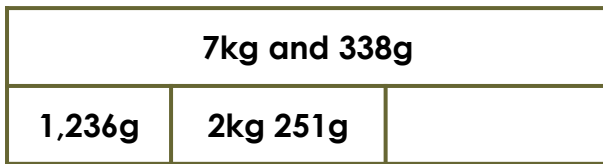
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9b. Complete the part-whole model.



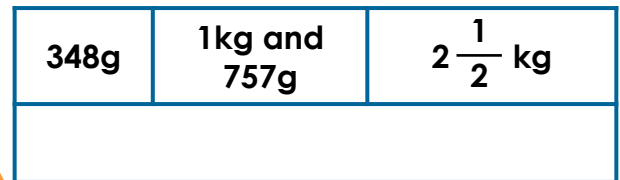
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10a. Complete the bar model.



VF

10b. Complete the bar model.



VF

11a. Use place value counters to find the difference between 3kg 432g and 2kg 824g.

Thousands	Hundreds	Tens	Ones
1000 1000 1000	100 100 100 100	10 10 10 10	1 1



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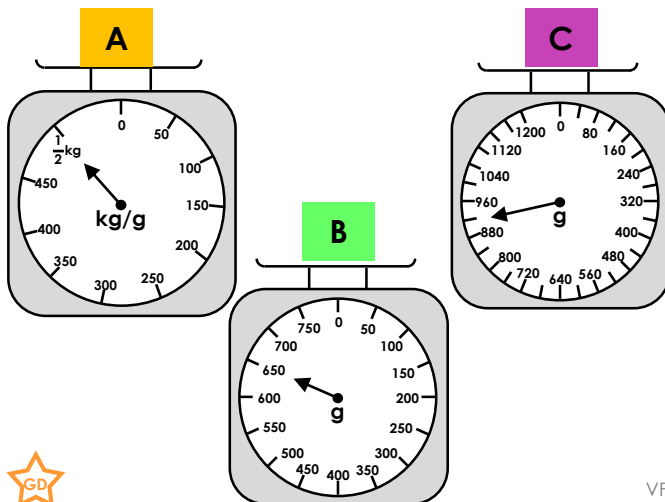
11b. Use place value counters to find the difference between 2kg 521g and 924g.

Thousands	Hundreds	Tens	Ones
1000 1000	100 100 100 100	10 10	1



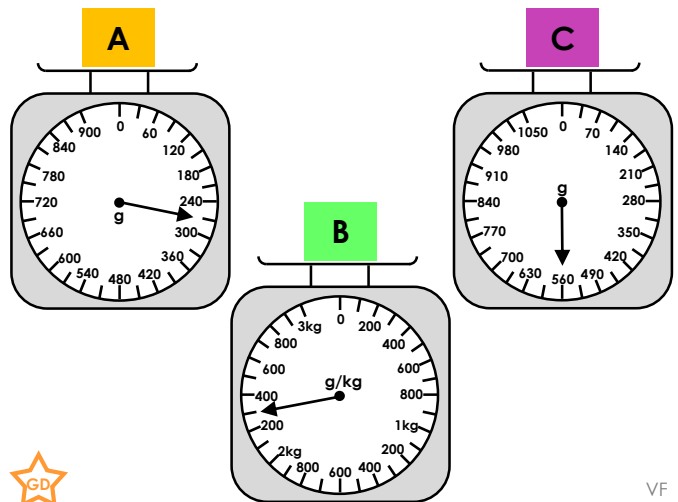
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12a. Find the total mass of these items.



VF

12b. Find the total mass of these items.



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Varied Fluency
Add and Subtract Mass

Developing

- 1a. 3kg and 800g
- 2a. 800g
- 3a. 1kg and 500g
- 4a. 1kg and 900g

Expected

- 5a. 4kg and 320g
- 6a. 6kg and 215g
- 7a. 2kg and 350g
- 8a. 2kg and 200g

Greater Depth

- 9a. 1kg and 694g
- 10a. 3kg and 851g
- 11a. 608g
- 12a. 2kg and 70g

Varied Fluency
Add and Subtract Mass

Developing

- 1b. 5kg and 500g
- 2b. 2kg and 600g
- 3b. 1kg and 700g
- 4b. 1kg and 600g

Expected

- 5b. 9kg and 355g
- 6b. 7kg and 285g
- 7b. 850g
- 8b. 2kg and 50g

Greater Depth

- 9b. 2kg and 720g
- 10b. 4kg and 605g
- 11b. 1kg and 597g
- 12b. 3kg and 130g