## Reasoning and Problem Solving Step 4: Adding - Crossing the Whole

## National Curriculum Objectives:

Mathematics Year 5: (5F10) Solve problems involving number up to 3dp
Mathematics Year 5: (5M9a) Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling

## Differentiation:

Questions 1, 4, 7 (Reasoning)
Developing Explain if a statement about a missing weight or volume in a calculation adding decimals, crossing the whole, is correct. Includes hundredths and tenths.
Expected Explain if a statement about a missing weight or volume in a calculation adding decimals, crossing the whole, is correct. Includes thousandths, hundredths and tenths. Greater Depth Explain if a statement about a missing weight or volume in a calculation adding decimals, crossing the whole, is correct. Includes thousandths, hundredths and tenths (with unconventional partitioning).

Questions 2, 5, 8 (Problem Solving)
Developing Calculate the missing length by adding decimals, crossing the whole, using hundredths and tenths.
Expected Calculate the missing length by adding decimals, crossing the whole, using thousandths, hundredths and tenths.
Greater Depth Calculate the missing length by adding decimals, crossing the whole, using thousandths, hundredths and tenths (with unconventional partitioning).

Questions 3, 6, 9 (Problem Solving)
Developing Compare equations using the appropriate symbol from a choice of 2. Equations involve adding decimals, crossing the whole, using hundredths and tenths. Expected Compare equations using the appropriate symbol from a choice of 3 . Equations involve adding decimals, crossing the whole, using thousandths, hundredths and tenths. Greater Depth Compare equations using the appropriate symbol from a choice of 3. Equations involve adding decimals, crossing the whole, using thousandths, hundredths and tenths (with unconventional partitioning).

## More Year 5 Decimals resources.

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## Developing

1a. Dara is not correct because 0.74 kg + $0.61 \mathrm{~kg}=1.35 \mathrm{~kg}$. The other tub weighs 0.51 kg .

2a. 0.78 m
3a. <, =, =

## Expected

4a. Leyla is not correct because $0.879 \mathrm{~kg}+$ $0.453 \mathrm{~kg}=1.332 \mathrm{~kg}$. The other jar weighs 0.463 kg .

5a. 0.869 m
6a. <, =, >, >

## Greater Depth

7 a . Kim is not correct because $0.976 \mathrm{~kg}+$ $822 \mathrm{~g}=1.798 \mathrm{~kg}$. The other book weighs 823 g or 0.823 kg .
8a. 0.922 m or 92.2 cm
9a. <, =, >

## Developing

1b. Ben is not correct because 0.62L + $0.43 \mathrm{~L}=1.05 \mathrm{~L}$. The other bottle contains 0.53 L .

2b. 0.79 m
3b. =, =, >

## Expected

4b. Ali is not correct because $0.728 \mathrm{~L}+$ $0.939 \mathrm{~L}=1.667 \mathrm{~L}$. The other bottle contains 0.839 L.

5b. 0.916 m
6b. $\langle\rangle,,\rangle,<$

## Greater Depth

7b. Jay is not correct because 0.958L + $866 \mathrm{ml}=1.824 \mathrm{~L}$. The other bottle contains 876 ml or 0.876 L .
8b. 0.878 km or 878 m
9b. >, >, <

