Year 4 Maths No Problem workbook, Chapter 9, Lesson 1-8, Pages 43-57, week beginning 04/05/20

Lesson 1: Writing Amounts of Money

Textbook pages: 60 – 62

Lesson Objective

To be able to write amounts of money as decimals.

Lesson Approach

To begin this lesson, show pupils the In Focus task and state that Ruby is not sure whether or not she has enough money to pay for the smoothie. How much does the smoothie cost? How much does Ruby have? Work through Let's Learn to show the class how to answer the problem.

Start by asking pupils how many 10p make £1. Then display the image that shows there are ten 10p in £1. How can we write 10p using £? Show pupils how to write this as a fraction and then as a decimal. 10p can be written as £0.10. How many 10p coins does Ruby have? How can we write that amount? Spend some time discussing the equivalence between 10p and £0.1 and 1⁄10 with different examples to ensure pupils make the link between prior learning and new learning.

Does Ruby have enough money for the smoothie? How do you know? What other way can we write the price of the smoothie or the amount of money she has? Guide pupils to see that when money is written in decimal notation using £, the number before the decimal point shows the pounds and the number after the decimal point shows the pence. Also highlight that £1 and 10p is written as £1.10 and not £1.1.

During Guided Practice, pupils are writing money in £ using decimal notation.

Lesson 2: Writing Amounts of Money

Textbook pages: 63 – 65

Lesson Objective

To be able to write amounts of money as decimals.

Lesson Approach

To begin this lesson, show pupils the In Focus task. Ask them to discuss which child has written the amount displayed correctly and share their answers.

State that we already know 10p = 1⁄10 of £1. What would 1p be? Display the image from Let's Learn 1. How many 1p coins are equivalent to £1? How can we write 1p as a fraction of £1? How can we write 1p in £ as a decimal? Use the same process for 5p (Let's Learn 2) and 50p (Let's Learn 3), then work through Let's Learn 4. Ask pupils if the children have written

the amounts correctly. How do we know they are correct? What should we do to find the total?

During Guided Practice, pupils are writing amounts of money as decimals.

Lesson 3: Comparing Amounts of Money

Textbook pages: 66 – 68

Lesson Objective

To be able to compare amounts of money.

Lesson Approach

To begin this lesson, show pupils the In Focus task and tell them your friend cannot decide which fruit and vegetables to buy and wants to compare the prices. Which digit do you think my friend should look at first when comparing the amounts? Why? What if this digit is the same, what should he compare next? Which item is the most expensive/least expensive? How do you know?

Compare the prices of pineapples and mangoes (Let's Learn). How much is each item? Compare the pounds, thinking aloud. Repeat the same process with each comparison, thinking aloud to make the process explicit to pupils, e.g. Tomatoes and oranges both have the same digit in the pounds column so that means I need to compare the value in the pence column or the tenths and hundredths. Instead of writing the words 'greater than' and 'less than' every time, I wonder what symbols I could use?

During Guided Practice, pupils are comparing amounts of money.

Lesson 4: Rounding Amounts of Money

Textbook pages: 69 – 71

Lesson Objective

To be able to round amounts of money to the nearest £1 and £10.

Lesson Approach

To begin this lesson, ask pupils if they have been to a cafe before. How do we know what to choose? How do we know how much items cost? Tell them your friend has gone into a cafe and wants to buy something that costs around £2.

Show pupils the In Focus task and ask them to discuss possible answers and share them with the class. Are all the items around £2? What about £1.80? Remind pupils about rounding to the nearest whole number and tell them we want to find out which item is closest to £2 using rounding to help. Work through Let's Learn showing them how to round the amounts using the number line.

During Guided Practice, pupils are rounding amounts of money to the nearest £1 and £10.

Lesson 5: Solving Problems Involving Money

Textbook pages: 72 – 74

Lesson Objective

To be able to solve word problems involving addition and subtraction of money.

Lesson Approach

To begin this lesson, show pupils the In Focus task. Ask them to discuss the problem and think of a strategy to solve it. What information can we get from the problem? Is there sufficient information to solve the problem? Are there intermediate calculations that need to be done? What would they be?

Work through Let's Learn to show pupils how to calculate the total. As there are three items, how can we find the total? Prompt them by asking questions, such as: Which total do you think I should find first? Why? What method should I use to add the amounts? Why? Is this the total of all of the items? What should I do next? How much does Elliott have to spend? Does he have enough for all of the items? How do you know? Does he need change from the shopkeeper? How can we calculate the change?

During Guided Practice, pupils are solving problems involving addition and subtraction of money. Before they begin, discuss what is expected and the differences in price between sitting in and taking away.

Lesson 6: Solving Problems Involving Money

Textbook pages: 75 – 77

Lesson Objective

To be able to solve word problems involving multiplication of money.

Lesson Approach

To begin this lesson, show pupils the In Focus task and tell them we are still learning to solve problems involving money. Ask them what they think the problems will involve today. Allow them to discuss the In Focus task and share their thoughts. Then work through the Let's Learn section together. Hannah buys 3 bottles of apple juice for the party but she doesn't know how to find the total amount. How could she find it? Find the answer using repeated addition and ask pupils if this is the most efficient method.

Then model partitioning and multiplication of the pounds and pence separately, and add the products together. Ask them to discuss each method and perhaps find out which they would feel most comfortable using. Display Let's Learn 2. Allow pupils time to discuss and calculate solutions on mini whiteboards before asking for the answer. Pupils need to calculate the costs of the nuts and crisps separately using multiplication before adding the products to find the total.

In pairs, ask pupils to work on the questions in Let's Learn 4 using mini whiteboards. Then invite a volunteer to model the calculation while the teacher agrees and records problem-solving steps on a flipchart for use during Guided Practice.

During Guided Practice, pupils are calculating amounts of money using addition, subtraction and multiplication.

Lesson 7: Solving Problems Involving Money

Textbook pages: 78 – 81

Lesson Objective

To be able to solve word problems involving division of money.

Lesson Approach

To begin this lesson, show pupils the In Focus task and ask them how we can work out how much Holly and Sam each pay. Does the question say that they share the cost equally? What are some ways the cost can be shared? Ask pupils to discuss this and share their ideas. Ask them what kind of calculation they need to perform to find the answer.

Ask pupils, if the cost is shared equally, what would the bar model look like? Give them some time to work on the bar model on their mini whiteboards. Then display the bar model image from Let's Learn 1. Ask pupils if their model is the same. Does the model help us to decide how to calculate how much each child must pay? What calculation do we need to do? Guide pupils to determine from the bar model that we will need to divide the total cost by 2 to find how much 1 child needs to pay. Show the class how to partition the amount of money into pounds and pence, divide both amounts by 2, then add them together.

Display the bar model from Let's Learn 2. How has the cost been shared between them? Ask pupils to discuss this before feeding back. How does the model help us to decide how to calculate the share for each child? Which calculations do we need to make to find how much each child pays? Let pupils think about this and gather their responses. Lead them to see that in order to divide by 3, the money needs to be partitioned in such a way that the numbers are divisible by 3.

Ask pupils to try doing Let's Learn 3. Ask them how many equal parts are there in £16.20. Guide them to partition the amount of money appropriately, then do the calculations.

During Guided Practice, pupils are solving similar word problems.

Lesson 8: Estimating Amounts of Money

Textbook pages: 82 – 84

Lesson Objective

To be able to estimate amounts of money.

Lesson Approach

To begin this lesson, ask pupils why estimating is an important skill to have. Ask them when they have they estimated before. Then show them the receipt in the In Focus task. How can we estimate the total amount of money spent? What is meant by 'estimate'? If necessary, rephrase what pupils say using words, such as 'approximate', 'rounding up' and 'rounding down'.

If we were to estimate the total, what would we need to do with each amount of money on the bill? Show pupils what to do by rounding a few of the amounts on the bill. Then give them time to round the rest of the amounts and estimate the total using mental maths strategies. Remind them about the 'approximately equal to' sign.

Show pupils Let's Learn 4. How can we estimate the price of one smoothie? Do we estimate the total amount of money before division or divide before estimating?

During Guided Practice, pupils are estimating the total amount of money for three items by rounding each one to the nearest pound. Model estimating the amounts to the nearest £10 and ask pupils to compare the totals when rounding to the nearest pound, and rounding to the nearest £10.