

Year 2 Maths Activities - Week Beginning 27.4.20.

Activity 1

Learning Objective: I can add amounts of money to find the total.

Success Criteria:

- I can use my knowledge of addition.
- I can use written methods to find the total.

Jackson buys bread and milk.



How much money does he spend?

We can use a written method to help us;

$$\begin{array}{r} 49 \\ + 30 \\ \hline 9 \end{array} \quad \text{(We always add the ones first, so } 9 + 0 = 9\text{)}$$
$$\begin{array}{r} 70 \\ \hline \end{array} \quad \text{(We add the tens second, so } 40 + 30 = 70\text{)}$$
$$\begin{array}{r} 79 \\ \hline \end{array} \quad \text{(We add the tens and ones together, so } 70 + 9 = 79\text{)}$$

A block of cheese costs 55p.

A pack of butter costs 27p.

How much will it cost to buy both?

$$\begin{array}{r} 55 \\ + 27 \\ \hline 12 \end{array} \quad \text{(5 + 7 = 12)}$$
$$\begin{array}{r} 70 \\ \hline \end{array} \quad \text{(50 + 20 = 70)}$$
$$\begin{array}{r} 82 \\ \hline \end{array} \quad \text{(70 + 12 = 82)}$$

Activities

Here is a price list.

Items	Price
Rubber	20p
Ruler	18p
Pencil	32p
Crayon	27p
Pen	45p
Glue	36p

Challenge:

What is the closest you can get to 65p.

Choose two items.
How many different amounts can you make?

• I spend exactly 50p. Which two items did I buy?

• I bought two of the same item and it cost me 90p. What was the item?

Items	Price
Rubber	20p
Ruler	18p
Pencil	32p
Crayon	27p
Pen	45p
Glue	36p

Activity 2

Learning Objective: I can find the difference between two amounts.

Success Criteria:

- I can use my knowledge of subtraction.
- I can use a written method to answer a question.

Ensure children understand the vocabulary of 'more', 'less', 'difference' and 'how much'.

A packet of sweets costs 25p.



A chocolate bar costs 48p.



Which costs more?

Which costs less?

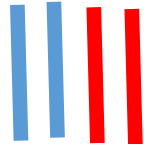
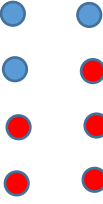
Show how to work out the difference by subtracting the smaller amount from the larger amount. The difference between the sweets and the chocolate is 23p. The chocolate costs 23p more. The sweets cost 23p less than the chocolate.

We don't do the column method for subtraction in Year 2. Instead, we draw the tens and ones. The tens are shown as lines and ones are shown as dots.

First we draw our little table and draw the tens and ones to represent the larger number.

We then subtract the ones first by crossing out the number we need to take away (in this case 5). We repeat by crossing out the tens that we need to take away (in this case 2 tens, or 20). We write how many tens and ones are left in the spaces below (so, 2 tens or 20 and 3 ones). Finally, we add our tens and ones together (so $20 + 3 = 23$).

N.B. children are used to physically crossing out the lines and dots that are taken away, but I wasn't sure how to show this, so I have changed the colour instead.

Tens	Ones
	
20	3

So, the difference between 25p and 48p is 23p. We have used subtraction to find the difference between the two amounts.

Look at this second example. This time we need to EXCHANGE a ten (we don't call it 'borrowing' anymore. We say 'exchange' or 'regroup'.

A packet of sweets costs 25p.



A chocolate bar costs 40p.



Which costs more?

Which costs less?

So, we begin in the same way, by drawing our larger number in our table. This time, the ones column will be blank because we don't have any ones.

Tens	Ones

Now, we have to take away 5 ones, but we can't because the ones column is empty. We are going to take a ten and give it to the ones column, but it can't stay as a 'ten stick', we have to change it into ones. The children are used to crossing out a ten and drawing ten dots in the ones column. I have done a whole new table just to make it clearer for you to see.

Tens	Ones

Once we have done the exchange, we can continue in exactly the same way we did in the last example. We cross out our 5 ones and our 2 tens and write the number of remaining tens and ones in the boxes below.

Activities

Finding the difference

1. A yo-yo costs 12p and a ball costs 15p. What is the difference between their prices?



2. A lolly-pop costs 50p and a sweet costs 40p. How much more does the lolly-pop cost?



3. A ruler costs 16p and a rubber costs 20p. How much less does the rubber cost?



4. A pencil costs 20p and a notebook costs 25p. What is the difference between their prices?



In this second set, there are one or two where children need to convert pounds and pence to just pence, so they should recognise that £1.00 = 100p or £1.20 = 120p. They can subtract in the same way, they just need an extra column to the left for hundreds. Hundreds are shown as squares (see Activity 3 example).

-
1. A yo-yo costs 19p and a ball costs 32p. What is the difference between their prices?



2. A lolly-pop costs 52p and a sweet costs 40p. How much more does the lolly-pop cost?



3. A ruler costs 67p and a rubber costs 35p. How much less does the rubber cost?



4. A pencil costs £1 and a notebook costs 97p. Is there a very big difference between their prices? Explain your answer.



5. A chocolate bar costs £1.20 and a chocolate bar with nuts costs £1.64. How much more does the chocolate bar with nuts cost?



Activity 3

Learning Objective: I can find change.

Success Criteria:

- I can use my subtraction skills to find change.
- I can change £1 into 100p.
- I can find the total amount first, write the calculation and then subtract to find the change.

Explain to children that sometimes, when we pay for something in a shop, we don't have the exact amount of money, so we have to give more money than the item costs. The shop keeper will work out THE DIFFERENCE and give us some change. Show slide to demonstrate this.

Explain that when we work out change, we need to do a subtraction.



A bag of apples costs £1, but the smallest coin Miss Jordan has is a £2.

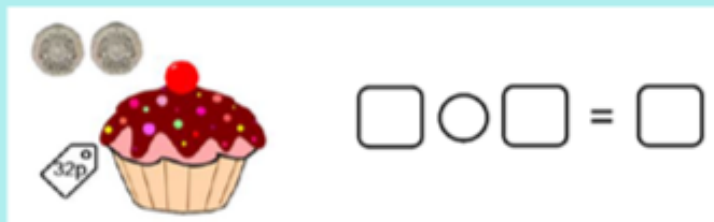
What will happen when she buys the apples?

In the example below, children could subtract the ones and tens by drawing them, as they did yesterday. Alternatively, they might know that 8p is the difference, because we would need 8 more to get to the next ten.

So we have 2X 20p coins, which makes 40p.

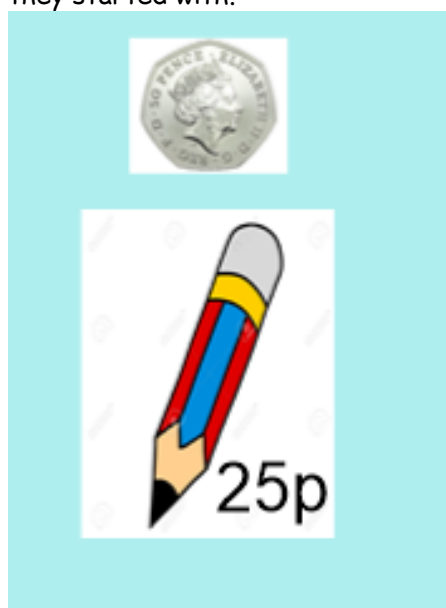
$40 - 32 = 8$.

Write the calculation to find the change



$$\square \ominus \square = \square$$

Again, in this example below, children could use their tens and ones, but they are taught that 25 is half of 50 as a number fact, so they hopefully would see that they will get 25p change, as the price of the item is half of the amount they started with.



In the next example, again, children might have their own way of working out the difference between 65 and 100. They could count on from 65 to 100 in 5s. They could use a 100 square to find out (by highlighting 65 and counting how many more to get to 100. They should see that one whole line is ten so they don't have to count in ones). They may have other methods of their own (we want children to be efficient when calculating, but we can also give them written methods to fall back on).

Alternatively, we could use yesterday's method (see below).

£1 = 100p

£2 = 200p

£5 = 500p

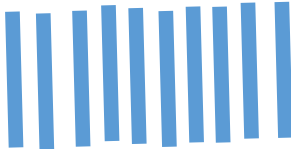
Freddie spends 65p in the shop.
He pays with a £1 coin.
How much change will he receive?

A cartoon illustration of a shop with a red roof and a sign that says 'OPEN'. To the right of the shop is a large £1 coin.

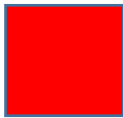
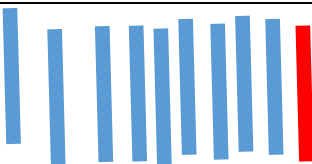
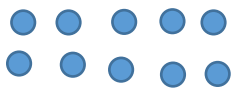
Hundreds are shown as squares.

Hundreds	Tens	Ones
		

Children need to exchange the hundred into the tens column and recognise that when we do this, the hundred changes into ten 10s. Children would do this by crossing out the 100 and drawing their ten 10s in the tens column (I have shown this by changing the colour of the 100, but children are used to crossing out).

Hundreds	Tens	Ones
		

Children would then need to exchange a ten into the ones column and remember to convert the ten into ten ones (again, shown by changing colour).

Hundreds	Tens	Ones
		

Once they have done all of their exchanging, they can calculate in exactly the same way by crossing out 5 ones and 6 tens. Their row at the bottom would look like this;

	30	5
--	----	---

The hundreds are blank because we no longer have any hundreds. They can then see that £1.00 or 100p, subtract 65p is 35p. they would get 35p change.

Activity - See the [Calculating Change Activity sheets](#).

Activity 4	Learning Objective: I can use my knowledge of fractions to help me tackle money problems. Success Criteria: - I can use my knowledge of money. - I can use my knowledge of fractions. - I can explain my reasoning. Activity - Would you rather... Answer the question and explain your reasons. Key words because greater than less than Would you rather have... $\frac{1}{4}$ of £20 or $\frac{1}{2}$ of £8 $\frac{1}{2}$ of £1 or $\frac{1}{4}$ of £2 $\frac{1}{3}$ of £15 or $\frac{2}{4}$ of £16 $\frac{3}{4}$ of £40 or $\frac{1}{2}$ of £70 $\frac{1}{2}$ of 50p or $\frac{1}{4}$ of 20p Guidance Children have been taught to calculate fractions by sharing. So, in the first example, they would look at the bottom number in the fraction first (the denominator), to see how many groups they need to share into (4). They would draw 4 circles, then share the 20 between them. They know that the top number in the fraction tells us how many of those 4 groups we are interested in, so in this example we only want to know how many are in one group. Children may not need to draw the groups at all. They may be able to use their multiplication and division facts instead, so they may know that 20 divided by 4 equals 5, so £5.00.
------------	--

Activity 5	Learning Objective: I can solve problems involving money. Success Criteria: - I can use my knowledge of money. - I can use my knowledge of addition and subtraction. - I can explain my reasoning. Activity Please see the Addition and Subtraction with Change Challenge Cards. Children should need to use all of their knowledge about adding and subtracting money in order to complete these. They may need to use written methods to support some of their calculations. Alternatively, they might be able to work out some of the answers mentally. If calculating mentally, can they explain how they did it? As an extra challenge, can they write sentences to explain how they solved the problems, step by step?
------------	--