

Diving into Mastery



Multi-Step Addition and Subtraction

twinkl

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



Diving



Deeper



Deepest

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.



Aim

- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.



Multi-Step Addition and Subtraction Problems

Diving



A Sweet factory offers guided tours. It has 4588 visitors in June and 7658 visitors in July. The visitor numbers for August were double the visitor numbers for June.

How many visitors did the sweet factory receive from June to August altogether?



| | | |
|------|------|--------|
| 4588 | 7658 | 9176 |
| June | July | August |

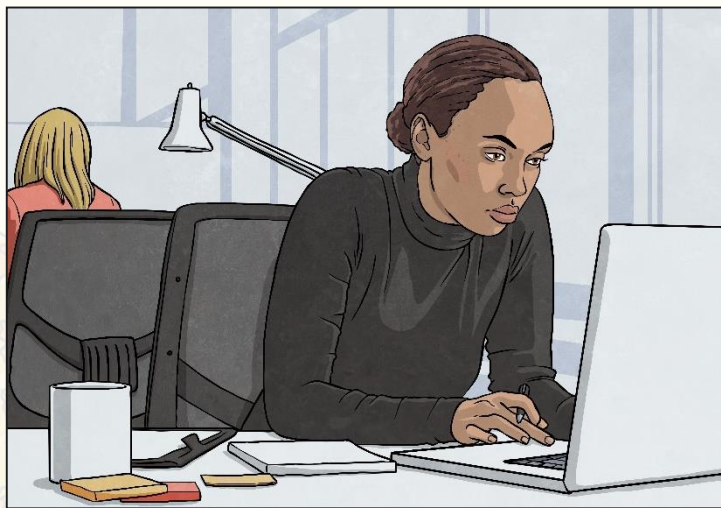
Multi-Step Addition and Subtraction Problems

Diving



A shop is looking at how much money it made in profit in a month. In week 1 the shop made £2678 in sales and spent £896 on their staff wages. In week 2 they made £3459 in sales and spent £456 on their electricity bill. In weeks 3 and 4 they made £5983 in sales but had to pay £1675 for their rent.

How much profit did the shop make by the end of the month?



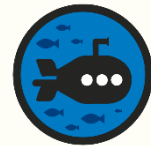
$$\begin{aligned} \text{£}2678 + \text{£}3459 + \text{£}5983 &= \\ \text{£}12\,120 &\text{ in sales} \end{aligned}$$

$$\begin{aligned} \text{£}896 + \text{£}456 + \text{£}1675 &= \\ \text{£}3027 &\text{ in costs} \end{aligned}$$

$$\begin{aligned} \text{£}12\,120 - \text{£}3027 &= \\ \text{£}9093 &\text{ profit} \end{aligned}$$

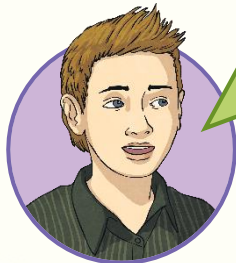
Multi-Step Addition and Subtraction Problems

Deeper



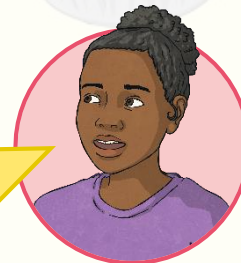
Keeva is organising a cake sale. She has made 178 cakes and her friend Harry has made 167 cakes. They want to make sure that they have made enough cakes so that everyone has a chance to buy one. They have worked out that there are 350 children in their school. Now they need to work out if they have enough cakes for everyone to buy one.

Which child's method is correct? Explain your reasoning.



We need to add my total of cakes to your total of cakes, then subtract from 350 to see if we have enough.

We need to subtract my total of cakes from 350 and then add your total of cakes.



Harry is correct. He finds the total number of cakes.

$$178 + 167 = 345$$

$$350 - 345 = 5$$

They have 5 fewer cakes than they need.

Multi-Step Addition and Subtraction Problems

Deepest



The most popular exhibit in a museum is the dinosaur exhibit. The least popular exhibit is the Iron Age exhibit. The difference in the number of visitors each exhibit had over a year was 9845. Each exhibit had more than 30 000 visitors but fewer than 50 000 visitors.

What are the possible visitor numbers for each exhibit? Once you have worked out one possible answer, explain how you could calculate all of the possible answers.

Answers for each exhibit should be a number over 30 000 but less than 50 000, with a difference of 9845. The dinosaurs exhibit should be greater by 9845.

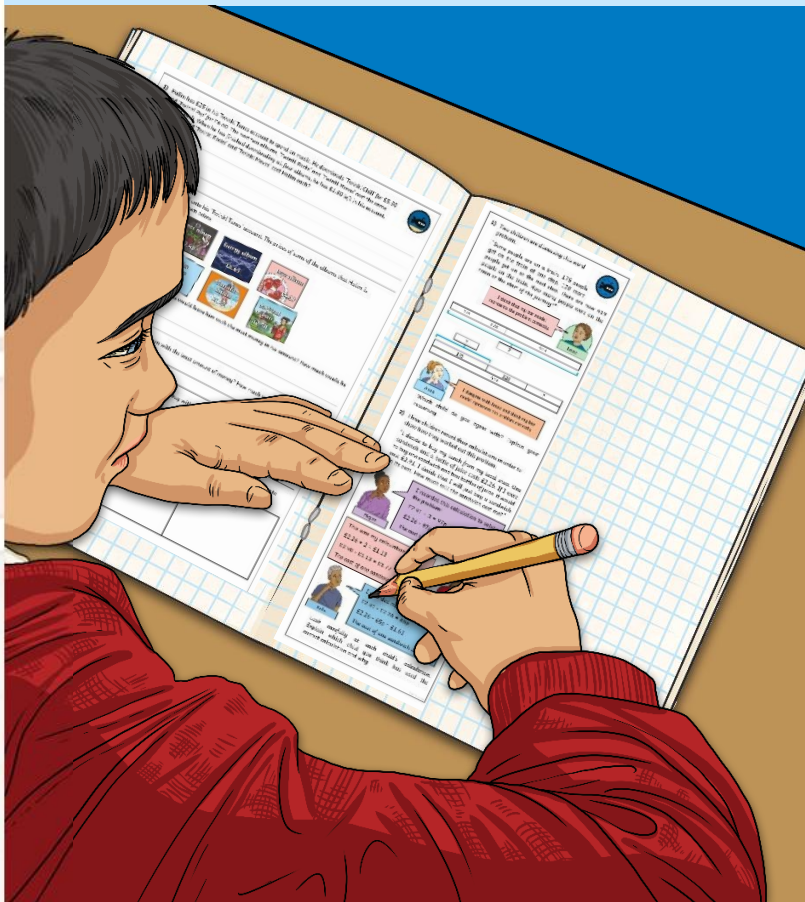
E.g. Iron Age = 31 001

dinosaurs = 40 846

To calculate subsequent answers, adjust your numbers. Add one to the number for one exhibit, whilst taking one from the number for the other exhibit.

Multi-Step Addition and Subtraction Problems

Dive in by completing your own activity!



1) Halim has £10.00 in his account to spend on Twinkl albums. He has bought 'Twinkl Chill' for £6.80, 'Twinkl Rocks' and 'Twinkl Beats' for £2.20 each. When he has finished buying the albums, he has £1.00 left in his account. How much did Twinkl Beats cost?

2) Halim decides to buy a new Twinkl album. He has £10.00 in his account. He has already spent £6.80 on 'Twinkl Chill', £2.20 on 'Twinkl Rocks' and £2.20 on 'Twinkl Beats'. He has £1.00 left in his account. How much did the new Twinkl album cost?

3) Two children have some money. One has 127p and the other has 96p. They want to buy a book that costs £1.00. How much more money do they need?

4) A bar model is shown below. The total length is 100. The left part is 127 and the right part is 96. How much more is needed to reach 100?

5) Here is a bar model to represent three unknown numbers. When B and C are added together, they make A. B is twice the value of C. A is a number between 100 and 200. Give three possible values for each of A, B and C.

6) Answer these problems in words by thinking about the key information in the question.

a) 168 parents watched the performance of a class play on Monday evening. On Tuesday evening, there were 29 fewer parents watching the performance. How many parents altogether watched the performances?

b) The school hall is normally able to seat 350 people. There are 10 rows of seats with 35 seats in each row. Tonight it can only fit in 9 rows of seats. If all of the above parents came tonight, would there be any seats left over?

c) Megan, Sadie and Ola have a combined age of 81. The combined age of Megan and Sadie is 52. If Megan is 24, how old must Sadie and Ola be?

d) The 'Healthy Scrumptious Snacks' cafe has just opened. It is looking at how much money it made in sales of food and drinks in the first two months. It sold £9456 worth of food and £3567 worth of drinks in the first month. In the second month, it made £380 less from food sales and £650 less from drinks sales than in the first month. The cafe's target was to sell £26500 worth of food and drinks in the first two months. How much more did they need to sell to meet their target?

Need Planning to Complement this Resource?

National Curriculum Aim

Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

For more planning resources to support this aim, [click here](#).

This screenshot displays three resource cards from Twinkl Planit. The first card, 'Beat the Teacher', features a stopwatch and the math problem $45\ 693 + 24\ 955 = 70\ 648$. The second card, 'An Inspector Calls', includes a play button icon and a scene with a hat and a desk. The third card, 'Searching for Clues', shows a desk with a typewriter and a scale. Below these cards are two worksheets: 'Addition and Subtraction: An Inspector Calls' and 'Puzzling Times', both featuring the Twinkl Planit logo.

This screenshot displays three resource cards from Twinkl Planit. The first card, 'Aye, Aye Captain', includes a map of an island and a text box asking about the difference between 'Aye' and 'Treasure!'. The second card, 'Treasure!', features a play button icon and a treasure chest on a beach. The third card, 'Aye, Aye Captain', shows a treasure map and a character with a telescope. Below these cards are two worksheets: 'Addition and Subtraction: Treasure!' and 'Treasure Hunt Map Sheet', both featuring the Twinkl Planit logo.

Twinkl Planit is our award-winning scheme of work with over 4000 resources.





twinkl