

# Reasoning and Problem Solving

## Addition and Subtraction Consolidation – Year 2

### About This Resource

This resource is aimed at Year 2 Secure and has been designed to give children the opportunity to consolidate the skills they have learned in Autumn Block 2 – Addition and Subtraction.

The questions are based on a selection of the same ‘small steps’ that are addressed in the block, but are presented in a different way so children can work through the pack independently and demonstrate their understanding and skills.

### Small Steps

Fact Families – addition and subtraction bonds to 20.

Add and subtract 10s

Subtract a 1-digit number from a 2-digit number – crossing ten

Add three 1-digit numbers

Subtract a 2-digit number from a 2-digit number – not crossing ten

Bonds to 100 (Tens and Ones)

Related Facts

Add two 2-digit numbers – crossing ten – add ones and add tens

Add and Subtract 1s

Check Calculations

### National Curriculum Objectives

Mathematics Year 2 [Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100](#)

Mathematics Year 2 [Add and subtract numbers using concrete objects, pictorial representations, and mentally for a two-digit number and ones](#)

Mathematics Year 2 [Add and subtract numbers using concrete objects, pictorial representations, and mentally for a two-digit number and tens](#)

Mathematics Year 2 [Add and subtract numbers using concrete objects, pictorial representations, and mentally for two two-digit numbers](#)

Mathematics Year 2 [Add and subtract numbers using concrete objects, pictorial representations, and mentally for adding three one-digit numbers](#)

Mathematics Year 2 [Show that addition of two numbers can be done in any order \(commutative\) and subtraction of one number from another cannot](#)

Mathematics Year 2 [Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures](#)

Mathematics Year 2 [Solve problems with addition and subtraction applying their increasing knowledge of mental and written methods](#)

Mathematics Year 2 [Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems](#)

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In the middle of the deep, dark forest there is a little gingerbread cottage. In the gingerbread cottage lives a witch, called Wilma.

You might remember Wilma from her run-in with Hansel and Gretel... that story seems to have really made the rounds! However, Wilma has put all that nastiness behind her and is now quite the social butterfly.

She is planning a big party for all her neighbours in the forest. Tag along while Wilma runs a few errands to get ready for the party. The first job is a little bit of redecorating!

1. Wilma's first stop is Barnable Bear's Building Supplies.

She knows she needs more than 10, but less than 25 giant gumdrops to go around the front door. She already has 6 gumdrops at home. How many will she need? How many different combinations can you find?



“Any chance we could narrow that down, Wilma?” asks Barnable.

“Hmm..” thinks Wilma. “I know! I will need twice as many gumdrops for the door as I used to decorate the window, and the window took 10!”



2. How many giant gumdrops will Wilma need to go around the door and three windows?



3. If she already has 6, how many gumdrops does Wilma have to buy for her door and windows?



“Oh, this is going to look brilliant! Now, time to sort out the garden – I’m off to Granny’s!” Wilma waves goodbye to Barnable and heads to her next stop.

For her gardening needs, Wilma always goes straight to Granny’s Garden Utopia. She wants three big candy-floss trees, three chocolate drop bushes and three liquorice vines for her garden. Luckily, Granny is having a sale!

| Item                  | Regular Price | Sale Price |
|-----------------------|---------------|------------|
| Candy floss trees     | £5            | £4         |
| Chocolate Drop bushes | £9            | £7         |
| Liquorice vines       | £7            | £6         |

4. How much does she spend on each item? Which item is the most expensive?

5. Wilma thinks she’s saved £5 on chocolate drops in Granny’s sale. Is she right? Explain why or why not.



6. “I would love to offer my visitors a nice cup of dandelion tea,” Wilma thinks to herself. “I’ll need to buy more dandelions. I should top up my other flower patches while I’m here, too!” If Wilma already has the following number of flowers growing in patches, how many more will she need to plant so that each patch has 100 flowers?

| If the flower patch has.... | Wilma must buy this many to make 100 |
|-----------------------------|--------------------------------------|
| 37 dandelions               |                                      |
| 45 roses                    |                                      |
| 67 chrysanthemums           |                                      |
| 84 daisies                  |                                      |
| 93 posies                   |                                      |

“Great, that’s the garden sorted! Now for my last stop.” Wilma hops on her broom and, in no time at all, arrives At Sal’s Sweet Shack. “Finally - my favourite shop in the Whole forest!” Wilma is expecting a big group at her party, and so she is going to need a lot of food.

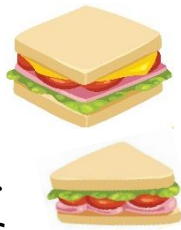


7. One single biscuit costs £2. One tin of 10 biscuits costs £22. What is the least expensive way for Wilma to buy 40 biscuits?



8. “Biscuits to go with the tea – check! Now, bring on the cakes!” One cake serves about 16 people. Wilma is expecting between 30 and 40 guests. “I’ll get 2 cakes, that will be plenty!” she says.

Will she have enough cake? Explain why or why not.



9. “I’ll take some sandwiches and a couple of pizzas too, please!”

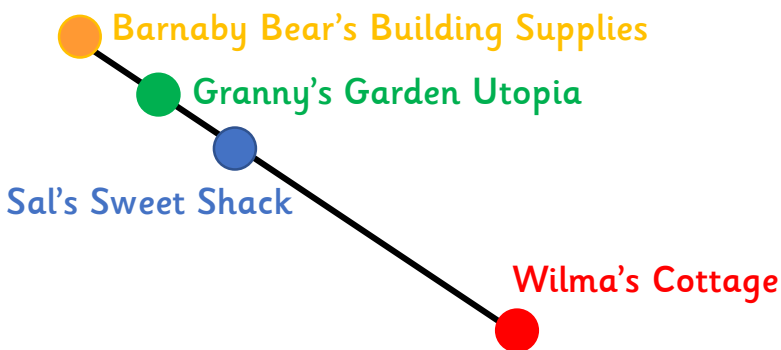
Wilma carefully balances all her purchases on her broom.

“I wonder how long it will take to get home.”

Barnaby’s Building Supplies is 1km from Granny’s Garden Utopia.

Granny’s is 7km from Wilma’s cottage. Sal’s is 1km from Granny’s.

How far does she have to fly?



10. Wilma gets home and checks the RSVPs. “Right! Before I start decorating, I must make sure I have enough chairs. I sent out 40 invites, and I know the Three Little Pigs, Goldilocks and Baby Bear are all unable to come. That means I need 37 chairs!”

Is Wilma correct? Explain why or why not.

With a wave of her wand, Wilma’s house is decorated, the food is set out, and she is all ready for her guests.

“Hooray! This is going to be a great party!” she smiles.



|    |              |               |               |
|----|--------------|---------------|---------------|
| 1. | $6 + 5 = 11$ | $6 + 10 = 16$ | $6 + 15 = 21$ |
|    | $6 + 6 = 12$ | $6 + 11 = 17$ | $6 + 16 = 22$ |
|    | $6 + 7 = 13$ | $6 + 12 = 18$ | $6 + 17 = 23$ |
|    | $6 + 8 = 14$ | $6 + 13 = 19$ | $6 + 18 = 24$ |
|    | $6 + 9 = 15$ | $6 + 14 = 20$ |               |

2.  $10 + 10 = 20$  will go around one door.  
 $20 + 10 + 10 + 10 = 50$  will go around the door and three windows.

3.  $50 - 6 = 44$ . She already has 6, so she needs to buy 44.

4. Candy floss trees:  $£4 + £4 + £4 = £12$   
Chocolate Drop bushes:  $£7 + £7 + £7 = £21$   
Liquorice vines:  $£6 + £6 + £6 = £18$   
The Chocolate Drop bushes are the most expensive.

5. Wilma is wrong. She has saved £6, not £5.  
Regular price chocolate drops:  $£9 + £9 + £9 = £27$   
Sale price chocolate drops:  $£7 + £7 + £7 = £21$   
 $£27 - £21 = £6$

|    |                             |                                      |
|----|-----------------------------|--------------------------------------|
| 6. | If the flower patch has.... | Wilma must buy this many to make 100 |
|    | 36 dandelions               | 63                                   |
|    | 45 roses                    | 55                                   |
|    | 67 chrysanthemums           | 33                                   |
|    | 84 daisies                  | 16                                   |
|    | 93 posies                   | 7                                    |

7. Single biscuits: 40 biscuits at £2 costs £80.  
Tin of biscuits: 4 tins of ten biscuits at £22 each costs £88.  
It is less expensive for Wilma to buy the biscuits individually.

8.  $16 + 16 = 32$   
Two cakes will only be enough if 32 or fewer people come to the party. She should get three cakes.

9. Sal's is 1km from Granny's, and Granny's is 7km away.  
 $7\text{km} - 1\text{km} = 6\text{km}$ .  
Wilma has to fly 6km to get home.

10. Wilma has counted the Three Little Pigs as one person, and calculated  $40 - 3 = 37$ . She should have calculated  $40 - 5 = 35$ . She needs 35 chairs.