

Reasoning and Problem Solving

Place Value Consolidation – Year 2

National Curriculum Objectives

Mathematics Year 2: [Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward](#)

Mathematics Year 2: [Recognise the place value of each digit in a two-digit number \(tens, ones\)](#)

Mathematics Year 2: [Identify, represent and estimate numbers using different representations, including the number line](#)

Mathematics Year 2: [Compare and order numbers from 0 up to 100; use \$<\$, \$>\$ and \$=\$ signs](#)

Mathematics Year 2: [Read and write numbers to at least 100 in numerals and in words](#)

Mathematics Year 2: [Use place value and number facts to solve problems](#)

About This Resource

This resource is aimed at Year 2 Expected and has been designed to give children the opportunity to consolidate the skills they have learned in Autumn Block 1 – Place Value.

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

Count objects to 100 and read and write numbers in numerals and words

Represent numbers to 100

Tens and ones using addition

Use a place value chart

Compare numbers

Order objects and numbers

Count in 2s, 5s and 10s

Count in 3s

More [Year 2 Place Value](#) resources.

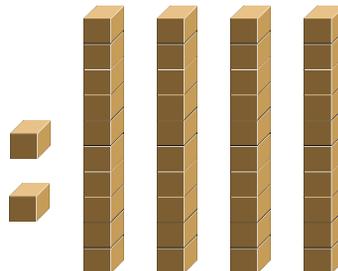
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Captain Pickles and Polly Parrot are trying to find their ship so they can set sail to find the hidden treasure.



1. All the ships in the harbour have numbers on them.
Captain Pickles' ship has this number on it:



Captain Pickles says his ship must be number 24.
Is he correct? Explain your answer to the captain.

2. Captain Pickles boards his ship.
He meets his pirate crew for the first time.
The number of pirates in his crew has the same
number of tens and ones.

How many pirates could
be in my crew?
Fill in the tens and ones chart
to find all the possible
answers.



Tens	Ones

2b. The number of pirates is between 40 and 50.
How many pirates are in his crew?

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Place Value Consolidation – Year 2

3. Another ship fires a cannonball and all the pirates run away! Captain Pickles calls them all back, but he's forgotten how many pirates he has in total!

He counts them in 5s. When he counts, he says the number 18.



Explain why he has counted them incorrectly.

4. It is Polly Parrot's job to fill in the pirate register. Polly says:



$40 + 4 = 404$ pirates in total

Explain the mistake she has made.

Finally, they set sail.



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5. Captain Pickles wants someone to be in charge of the anchor. Six pirates line up. All the pirates have a number but they are all mixed up. Order the pirates from smallest to largest and whoever is fourth from the front will get the job!

					
21	3	13	32	23	12

Explain how you ordered them and which number pirate will be in charge of the anchor.



6. There's been a storm. Captain Pickles wants four pirates to scrub the decks. He has written a list of the pirates' numbers. He says:



Each pirate's number on my list is a 2-digit number. The digits of each number add up to 7. None of the digits are 0.

List the numbers of the pirates who are going to scrub the decks.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Now, write their numbers in order from largest to smallest. Then they can stand in order for the Captain.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Reasoning and Problem Solving
Place Value Consolidation – Year 2

7. Some of the pirates must climb the rigging. It's a risky job but someone has to do it! The pirates who could stand in the red square get the job.



29	<		<	34
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Which pirates get the job? Explain how you know to Captain Pickles.

8. Captain Pickles spots something in the distance. He's trying to work out how far away it is, but he's using different maps and is getting very confused.

He thinks there's an enemy ship 72 metres away.

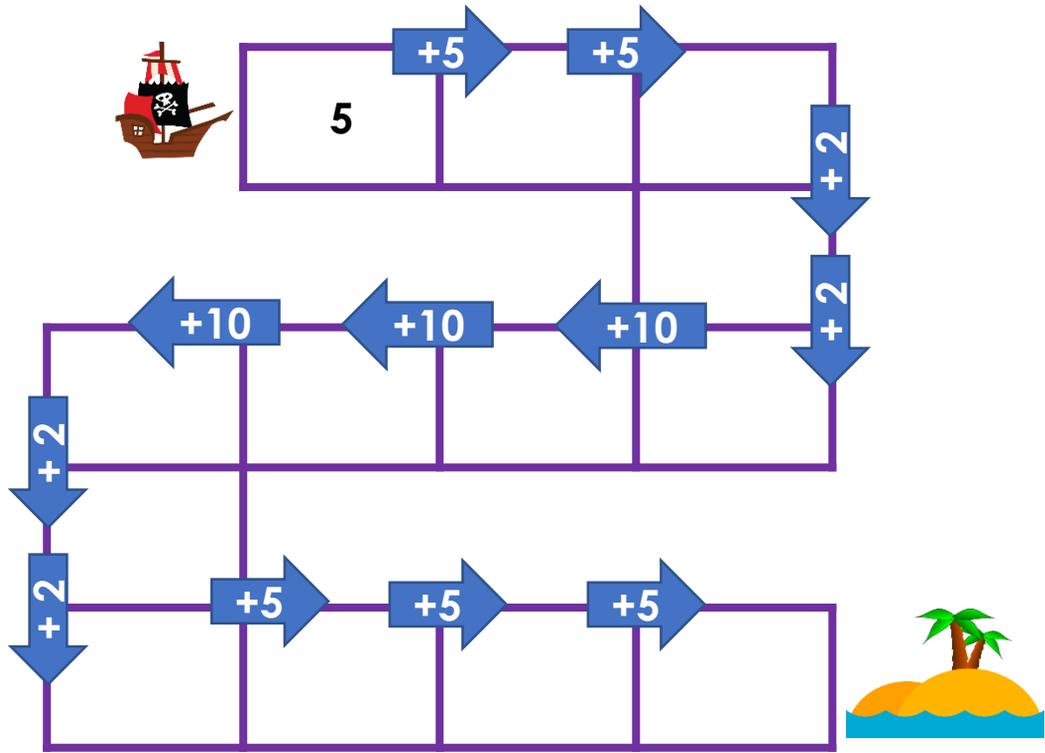
Mark 72 metres on each of his map lines to help him.



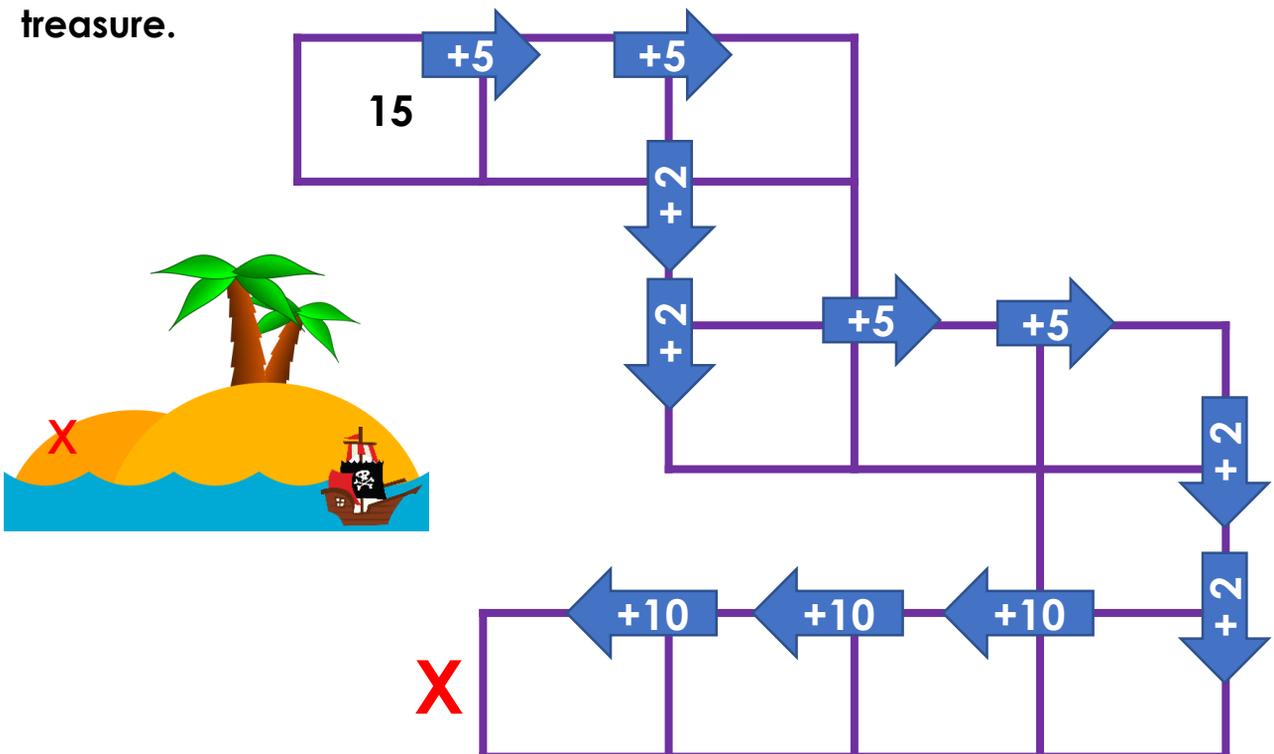
The ship moves away. Luckily, this time, it's not the enemy!

Reasoning and Problem Solving
Place Value Consolidation – Year 2

9. “Desert island ahead!” shouts the ship’s lookout. Captain Pickles has to carefully steer the ship around all the rocks to reach the island. Help him steer the ship the correct number of metres in each direction to reach the island.



10. They safely reach the island. Great steering, Captain! Now they must follow the treasure map and an X marks where the treasure lies. Help them count the correct number of steps in each direction to find the treasure.



Reasoning and Problem Solving
Place Value Consolidation – Year 2

11a. They've found the treasure. Now to dig! The treasure chest appears but it has a rusty padlock on it! The padlock has a code to open it. The code is made up of two 2-digit numbers. But it could use any of the digits below. What numbers could the code include?

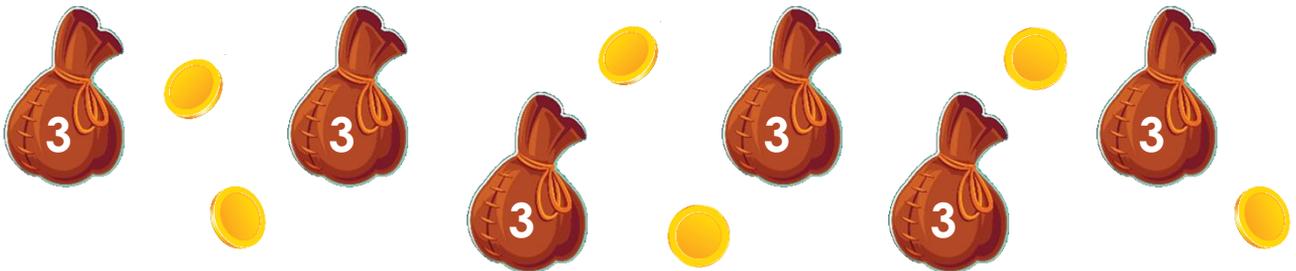


11b. The largest number followed by the smallest number make up the code for the padlock.

largest	

smallest	

12. They open the treasure chest and all stare in disbelief! The treasure chest is full of money bags. Each bag contains 3 gold coins but some bags have burst and so there are some loose coins as well. How many gold coins are there altogether?



Explain to Captain Pickles how you know.



Captain Pickles and his crew take the treasure and head back to the ship. It's been a successful day! But as they set sail, disaster strikes...

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Place Value Consolidation – Year 2

1. Captain Pickles is not correct. He has 4 tens and 2 ones so his ship is number 42.

2a. The possible numbers of pirates in his crew are:
11, 22, 33, 44, 55, 66, 77, 88, 99

Tens	Ones
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

2b. 44

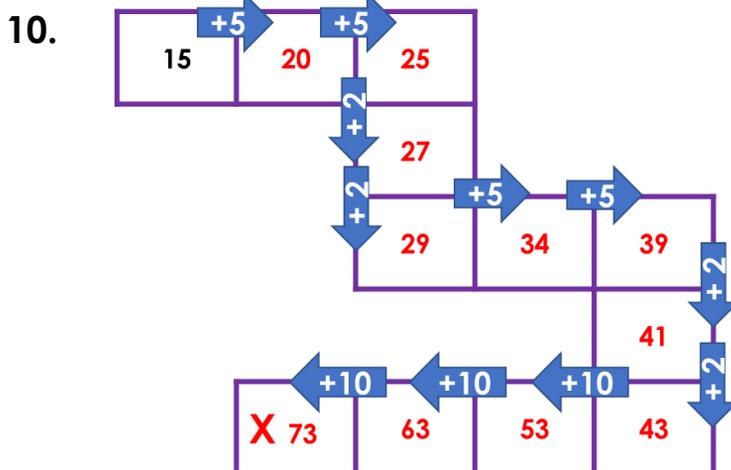
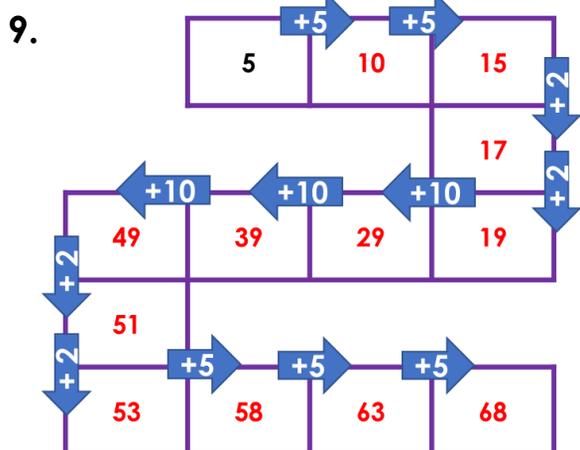
3. He has counted them incorrectly. If he counts in 5s, he should say: 5, 10, 15, 20 so he should not have said 18.

4. Polly Parrot has combined the numbers incorrectly to make 404. The 40 is 4 tens and 0 ones and 4 is 4 ones so $40 + 4 = 4$ tens and 4 ones, which is 44.

5. The order of the pirates from smallest to largest should be: 3, 12, 13, 21, 23, 32. So pirate twenty-one is 4th from the front and will be in charge of the anchor.

6. Possible answers: 16, 25, 34, 43. From largest to smallest 43, 34, 25, 16.

7. 30, 31, 32 and 33. These numbers are greater than 29 but less than 34.



11a. 45, 48, 54, 58, 84, 85.

11b. Largest: 85 Smallest: 45 Code: 8545.

12. There are 6 bags with 3 coins. Counting in 3s, this equals 18. Plus there are 6 loose gold coins so there are 24 coins in total.