

### **Addition Prior Test: Question 5 and Question 7**

**Objective:** I can solve addition problems.

**NC: NASMD 8:** solve problems involving addition

**NC: NASM D9:** Use approximation to check answers to calculations

**NC: NPV 1:** read, write, order and compare numbers up to 10 000 000 and determine the value of each digit

**NC: NPV 2:** round any whole number to a required degree of accuracy

#### **Teacher Notes:**

Use this lesson to focus on securing addition strategies and applying to different types of problems. The activities below provide a wide range of fluency and problem solving opportunities.

In the input, you may want to recap the methods that have been taught in addition so far and look at a few of the problems together. Encourage the children to think of their own starting points and contribute ideas as to how to solve the problems. Children could take time to share these as a class or you may want to do individual inputs for each task, regrouping the children as necessary.

#### **Practice Activities**

**Purple Practice:** Most suited for children that made errors in **Question 5 of the Addition Prior Assessment Task** and would benefit from tackling missing box type questions.

The purple activity provides the opportunity for the children to work out the answer to missing box questions. This provides the opportunity to discuss different strategies for different types of questions and some children may suggest using the inverse operation to help (especially in section 3). Additionally, section 2 provides opportunity for the children to apply written addition skills previously taught.

**Green Practice:** Most suited for children who had difficulty with reading amounts in words and rounding in **Question 7**. Also for children who would benefit from applying mental and written addition strategies and a variety of other skills such as: using their knowledge of the relationship between centimetres, metres and kilometres; rounding and reading amounts in words and writing these in digits.

The children should read the table of information carefully and convert centimetres into metres and add the 3 amounts together. Once they have a total they should apply their knowledge of rounding to the nearest hundred.

**Yellow Practice** Most suited for children that made errors in **Question 7** and would benefit from tackling word problems.

Although majority of the questions are addition word problems, there are also some other operations that are required so that the children are challenged in selecting the correct operation.

**Mastery** or could be used as a post learning assessment to review problem solving, reasoning and fluency skills.

This activity develops the children's problem solving skills by encouraging them to use their knowledge of number facts to help them to think about possibilities of how the pens could be purchased. The children will also need to explore possibilities through trial and improvement to find the best possible answer and think about how to organise their work to ensure that they have tried a variety of combinations. There is also the opportunity to apply addition, subtraction and multiplication skills.

### Answers

#### Purple Task:

Q1: a)  $3619 + 4250$  b)  $7243 + 2276$  c)  $3645 + 7035$  d)  $1946 + 6378$

e)  $8888 + 999$  f)  $4153 + 4847$

Q2 a) 76787 2b) 116464 2c) 20625 2d) 910023

Q3 a) 7422 3b) 6545 3c) 86023 3d) 191600

**Green Task:**

Pipe 1	Pipe 2	Pipe 3	When rounded to the nearest hundred = 1 Km
four hundred and fifty-five metres	seven hundred and two metres	one thousand and seventy-seven metres	
one thousand and two metres	thirty-seven metres	one thousand centimetres	✓
two hundred and forty-one metres	six hundred and five	one hundred and twelve	✓
eight hundred and ten metres	nine thousand centimetres	one hundred and fifty metres.	

**Yellow Task:**

Q1: 31, 605

Q2: £3300

Q3: £11,135

Q4: £239.76

Q5: 462 minutes

**Mastery:** Children will have found a variety of ways using knowledge of multiples. Encourage the children to discuss their best way with other children.

The best option is:

11 x 2 packs of 2 pens

1 x 3 pack of pen = £ 12.55 which means £7.45 change

1. Fill in the missing boxes. How can you check that your answers are correct?

a)

$$\begin{array}{r} 3 \quad 6 \quad \square \quad 9 \\ + \quad 4 \quad \square \quad 5 \quad \square \\ \hline 7 \quad 8 \quad 6 \quad 9 \end{array}$$

b)

$$\begin{array}{r} 7 \quad 2 \quad 4 \quad \square \\ + \quad 2 \quad \square \quad \square \quad 6 \\ \hline 9 \quad 5 \quad 1 \quad 9 \end{array}$$

c)

$$\begin{array}{r} 3 \quad 6 \quad \square \quad 5 \\ + \quad \square \quad \square \quad 3 \quad \square \\ \hline 1 \quad 0 \quad 6 \quad 8 \quad 0 \end{array}$$

d)

$$\begin{array}{r} 1 \quad \square \quad 4 \quad \square \\ + \quad 6 \quad 3 \quad \square \quad 8 \\ \hline 8 \quad 3 \quad 2 \quad 9 \end{array}$$

e)

$$\begin{array}{r} 8 \quad 8 \quad 8 \quad 8 \\ + \quad \square \quad \square \quad \square \\ \hline 9 \quad 8 \quad 8 \quad 7 \end{array}$$

f)

$$\begin{array}{r} 4 \quad \square \quad \square \quad 3 \\ + \quad \square \quad 8 \quad 4 \quad \square \\ \hline 9 \quad 0 \quad 0 \quad 0 \end{array}$$

2. Fill in the missing boxes.

a)  $\square = 23159 + 53628$

c)  $\square = 13243 + 7382$

b)  $16273 + 100291 = \square$

d)  $628101 + 281922 = \square$

3. Fill in the missing boxes.

a)  $5261 + \square = 12683$

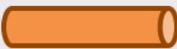
c)  $20958 + \square = 106971$

b)  $\square + 18273 = 24818$

d)  $273749 + \square = 465349$

Tyler has different length pipes. He wants to place them together so that he has around 1 Kilometre in length.

Place a tick in the box if the combinations will make 1 kilometre when rounded to the nearest 100 meters.

Pipe 1 	Pipe 2 	Pipe 3 	When rounded to the nearest hundred = 1 Km
four hundred and fifty-five metres	seven hundred and two metres	one thousand and seventy-seven metres	<input type="checkbox"/>
one thousand and two metres	thirty-seven metres	one thousand centimetres	<input type="checkbox"/>
two hundred and forty-one metres	six hundred and five metres	one hundred and twelve metres	<input type="checkbox"/>
eight hundred and ten metres	nine thousand centimetres	one hundred and fifty metres.	<input type="checkbox"/>

Tip:  
Read the measurements carefully.

1. Leicester City football club order 4 flavours of crisps to hand out to all fans at the last game of the season.



7456  
packets



6829  
packets



6372  
packets



10948  
packets

How many packets of crisps do they order altogether?

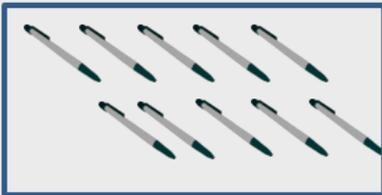
2. Ralph and Sebastian have both been saving for new cars. They save £275 each a month. How much have they both saved altogether after 6 months?
3. A sports ground has been raising money for a new spectator stand. They have held 3 fundraising days. On the first they raised £12,674. On the second they raised £23,819 and on the third they raised £17,372. How much more do they need to raise to meet their £65,000 target?
4. A box holds 4 footballs. Each football sells for £9.99. A sports shop sells 6 boxes in one week. How much money did they receive from the sale of the footballs?
5. There are 4 sections to a 20-mile sponsored walk. Each friend completes one section of the walk. Their times are recorded below.

Name	Time taken
Suzie	1.5 hours
Beth	2 and $\frac{1}{4}$ hours
Tom	2 hours and 12 minutes
Rishi	1 hour $\frac{3}{4}$

How long did it take the four friends to complete the whole of the walk?  
Work out your answer in minutes.

Miss Roberts needs 25 new pens for her class.

Look at how she can buy these pens from the shop. She has a £20 budget. Which packs of pens should she buy so that she has 25 pens and the most change to buy something else for the class?

1 pen	2 pens	3 pens	10 pens
			
60p	£1.00	£1.55	£5.20

Where are you going to start?  
Explain your approach.  
If you make changes to your method, why?  
How can you prove you have found the best price?

Think about

Working systematically, trial and improvement, use of prior knowledge and spotting patterns.