

**Year 3 Maths – week beginning 13.7.2020**

Theme	Formal methods for calculation (Lesson 6 of 6) <b>CONSOLIDATION LESSON</b> Division	Word Problems (Lesson 1 of 3) Addition and Subtraction	Word Problems (Lesson 2 of 3) Multiplication	Word Problems (Lesson 3 of 3) Division	Place Value (Lesson 1 of 1) Numbers to 10,000
<b>Factual fluency (to aid fluency)</b>	<a href="#">Multiplication and division facts practice</a> (10 questions)	<a href="#">Addition practice</a> (10 questions)	<a href="#">8 times tables practice</a> (10 questions)	<a href="#">Equivalent fractions practice</a> (10 questions)	<a href="#">Numbers to 1,000</a> (10 questions)
<b>Problem/activity of the day</b>  <b>Remember, just like in class, you can still show the depth of your knowledge</b> <a href="#">LINK</a>	<p><b>(Lesson 1 resources below)</b> <b>MAKING LINKS:</b> Last week, you practised using a written method for division. Today you are going to build on this by dividing with regrouping.</p> <p><b>THINK: (support below)</b> My friend had 52 sweets. She put them equally into 4 bags. How many sweets were there in each bag?</p> <p><i>If you have online parent access, this lesson is based on textbook 3A, chapter 4, lesson 7.</i></p> <p><b>SEE: (model below)</b> <a href="#">Watch lesson video here.</a></p> <p><b>DO:</b> Use what you have learnt today to solve: <b>Part 1:</b> Draw tens and ones to solve the calculations below. Check your answers before moving onto: <b>Part 2:</b> Use the written method to solve the calculations below. Use drawings alongside if they help you.</p>	<p><b>(Lesson 2 resources below)</b> <b>MAKING LINKS:</b> Last week, you practised using the column method to add and subtract. Today, you're going to use this when solving word problems.</p> <p>To remind yourself of methods for addition and subtraction, re-watch the videos from last week on <a href="#">addition</a> and <a href="#">subtraction</a>.</p> <p><b>THINK: (support below)</b> Ella baked 400 cupcakes. She gave 270 cupcakes away. How many cupcakes did she have left?</p> <p><i>If you have online parent access, this lesson is based on textbook 3A, chapter 2, lessons 21 and 23.</i></p> <p><b>SEE: (model below)</b> <a href="#">Watch lesson video here.</a></p> <p><b>DO:</b> Use what you have learnt today to solve: <b>Part 1:</b> Solve the problems using the bar model to help you work out what you need to do. Check your answers before moving onto: <b>Part 2:</b> Draw a bar model for each problem and solve it.</p>	<p><b>(Lesson 3 resources below)</b> <b>MAKING LINKS:</b> Yesterday, you practiced solving addition and subtraction problems. Last week, you practised using the formal written method for multiplication. Today, you're going to solve word problems involving multiplication.</p> <p>To remind yourself of methods for multiplication, re-watch the videos from last week on multiplication <a href="#">here</a> and <a href="#">here</a>.</p> <p><b>THINK: (support below)</b> There are 16 yellow crayons on the table. There are twice as many purple crayons as yellow crayons on another table. a) How many purple crayons are there? b) How many crayons are there altogether?</p> <p><i>If you have online parent access, this lesson is based on textbook 3A, chapter 4, lesson 9.</i></p> <p><b>SEE: (model below)</b> <a href="#">Watch lesson video here.</a></p> <p><b>DO:</b> Use what you have learnt today to solve: <b>Part 1:</b> Solve the problems using the bar model to help you work out what you need to do. Check your answers before moving onto: <b>Part 2:</b> Draw a bar model for each problem and solve it.</p>	<p><b>(Lesson 4 resources below)</b> <b>MAKING LINKS:</b> Yesterday, you practiced solving multiplication problems. On Friday and Monday, you practised dividing. Today, you're going to solve word problems involving division.</p> <p>To remind yourself of methods for division, re-watch the videos from last week and earlier in the week on division <a href="#">here</a> and <a href="#">here</a>.</p> <p><b>THINK: (support below)</b> Poppy has 36 marbles. She has twice as many marbles as Rory has. a) How many marbles does Rory have? b) How many marbles do the children have altogether?</p> <p><i>If you have online parent access, this lesson is based on textbook 3A, chapter 4, lesson 10.</i></p> <p><b>SEE: (model below)</b> <a href="#">Watch lesson video here.</a></p> <p><b>DO:</b> Use what you have learnt today to solve: <b>Part 1:</b> Solve the problems using the bar model to help you work out what you need to do. Check your answers before moving onto: <b>Part 2:</b> Draw a bar model for each problem and solve it.</p>	<p><b>(Lesson 5 resources below)</b> <b>MAKING LINKS:</b> This year, you have learnt to understand and use numbers to 1,000. You learnt to recognise how many hundreds, tens and ones there are in a 3-digit number, and what each of these digits stands for. For example, the digit 3 in 346 stands for 300. The digit 4 stands for 40, and the digit 6 stands for 6. Today, you are going to learn to count in thousands up to 10,000.</p> <p><b>THINK: (support below)</b> There are 100 cherries in a box. There are 10 boxes in one row. How many cherries are there in one row? How many cherries are there in 10 rows?</p> <p><b>SEE: (model below)</b> <a href="#">Watch lesson video here.</a></p> <p><b>DO:</b> Use what you have learnt today to solve: <b>Part 1:</b> Answer the questions below. Check your answers before moving onto: <b>Part 2:</b> Complete the number patterns below.</p>
<b>Methods, tips, clues &amp; checks</b>	Day 1 resources and answers below	Day 2 resources and answers below	Day 3 resources and answers below	Day 4 resources and answers below	Day 5 resources and answers below

**See below for resources to support you to THINK-SEE-DO**



**DAY 1 RESOURCES:**

**THINK:** If you have online parent access, this lesson is based on textbook 3A, chapter 4, lesson 7.

My friend had 52 sweets. She put them equally into 4 bags. How many sweets were there in each bag?

**DO:**

Part 1: Draw tens and ones like in the See box to solve these calculations.

- a)  $92 \div 2$
- b)  $72 \div 3$
- c)  $56 \div 4$
- d)  $75 \div 5$
- e)  $96 \div 4$

Check your answers below.

Part 2: Use the written method to solve these calculations. If you find it challenging to work out how to partition the number at first, draw tens and ones to help you.

- a)  $78 \div 2$
- b)  $87 \div 3$
- c)  $68 \div 4$
- d)  $85 \div 5$
- e)  $96 \div 8$
- f)  $72 \div 3$

Deepening:

Solve these equations using the written method.

- 1.  $84 \div 4$
- 2.  $92 \div 4$

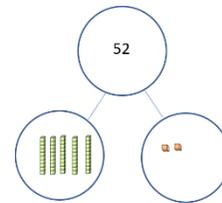
What is the difference between how you needed to solve these two calculations? Why was this different?

**SEE:**

[Watch the lesson video here.](#)

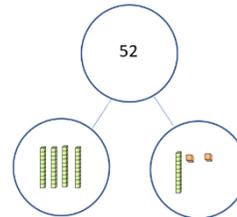
To find the number of sweets in each bag, divide 52 by 4.

**Step 1:** Decide how to partition 52 to make it easier for us to divide.



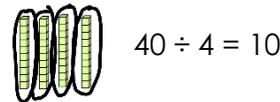
If I partition 52 into 50 and 2, this isn't very helpful because I can't easily divide 50 by 4 and I can't easily divide 2 by 4.

Let's try another way.

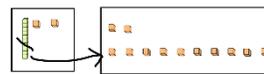


I have partitioned 52 into 40 and 12. This is more helpful because I can easily divide 40 by 4 and I can easily divide 12 by 4.

**Step 2:** Divide the tens by 4.



**Step 3:** Regroup 1 ten into 10 ones.



**Step 4:** Divide the ones by 4.



**Step 5:** Add the results.

$10 + 3 = 13$

There are 13 sweets in each bag.

Written method



**DAY 2 RESOURCES:**

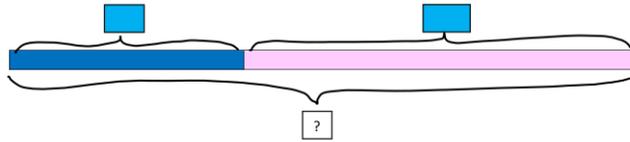
**THINK:** If you have online parent access, this lesson is based on textbook 3A, chapter 2, lessons 21 and 23.

Ella baked 400 cupcakes. She gave 270 cupcakes away. How many cupcakes did Ella have left?

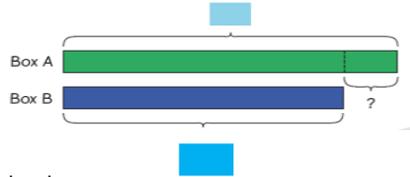
**DO:**

**Part 1:** Solve these problems. Use the bar models to help you work out what you need to do.

- a) Holly went berry picking. She picked 127 blueberries and 235 strawberries. How many berries did she pick altogether?



- b) There are 140 rubbers in Box A and 96 rubbers in Box B. How many fewer rubbers are there in Box B than in Box A?



Check your answers below.

**Part 2:** Draw a bar model and solve each of these problems.

Remember to give your answer in a full sentence.

- a) Fred has read 137 pages of his book. He has 269 pages left to read. How many pages are there in the book?
- b) There are 534 pieces of fruit in a crate. 346 of them are bananas and the rest are pears. How many pears are there?
- c) There are 487 pupils in Moon Primary School. There are 139 less pupils in Sky Primary School. How many pupils are there in Sky Primary School?

**Deepening:** Ruby solved this problem incorrectly. Spot her mistake and explain where she went wrong.

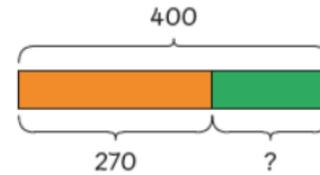
Freya folds 216 paper aeroplanes. She folds 39 more paper aeroplanes than Elliott. How many paper aeroplanes does Elliott fold?

$216 + 39 = 255$

Elliott folds 255 paper aeroplanes.

**SEE:** [Watch the lesson video here.](#)

We know the whole number of cupcakes is 400, so this is the whole bar. The part that she gave away is 270. This is a bit more than half of 400, so I'll make sure this bar is a bit longer than half of the whole bar.



The bar model helps me see that to find out how many she had left, I need to subtract 270 from 400.

H	T	O	
3	4	0	
-	2	7	0
1	3	0	

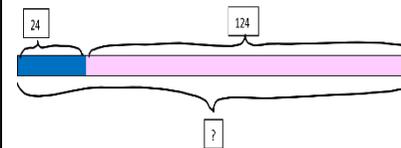
We can use the column method to subtract. If you need a reminder for using the column method, re-watch [this video](#) for addition or [this video](#) for subtraction from last week.

**Ella had 130 cupcakes left.**

We always write a statement to answer the question when solving word problems.

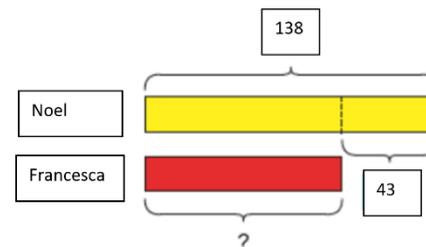
Let's have a look at bar models we might draw for some different problems.

There are 24 balls in a jar. Max puts 124 more balls into the jar. How many balls are there in the jar now?



For this problem, we know the two parts, but we don't know the whole. I can see from the bar model that I need to add the two parts together to find the whole number.

Noel collects stamps. He has 138 stamps. Francesca has 43 fewer stamps than Noel. How many stamps does Francesca have?



For this problem, because we are comparing the number of stamps that Noel and Francesca have, it is helpful to draw 2 separate bars. This means we can see on the bar model how many more or how many fewer they have.

**DAY 3 RESOURCES:**

**THINK:** If you have online parent access, this lesson is based on textbook 3A, chapter 4, lesson 9.

There are 16 yellow crayons on the table.

There are twice as many purple crayons as yellow crayons on another table.

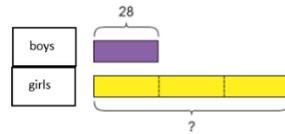
- a) How many purple crayons are there?
- b) How many crayons are there altogether?

**DO:**

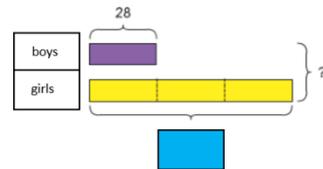
Part 1: Solve these problems. Use the bar models to help you work out what you need to do.

There are 28 boys in a football club. There are 3 times as many girls as there are boys.

- a) How many girls are there?



- b) How many children are there altogether?



Check your answers below.

Part 2: Draw a bar model and solve each of these problems.

Remember to give your answer in a full sentence.

1. A farmer has 46 sheep. He has twice as many chickens as sheep.
  - a) How many chickens does he have?
  - b) How many sheep and chickens does he have in total?
2. There are 39 blue beads in a box. There are 4 times as many silver beads as blue beads in the box. How many beads are there altogether?

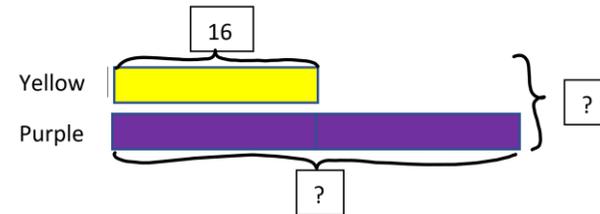
**Deepening:**

Write your own word problem involving multiplication and solve it.

**SEE:**

[Watch the lesson video here.](#)

Let's draw a bar model to help us understand what to do to solve the problem.



I know that there are **twice** as many purple crayons as yellow crayons, so for the bar representing the purple crayons, I can draw **two** lots of the bar representing the 16 yellow crayons.

I can label how many yellow crayons there are (16), but I don't know how many purple crayons there are. I show this with a question mark.

I also don't know how many crayons there are altogether. I can show this by joining both the yellow crayons and the purple crayons together, and write a question mark.

- a) To find the number of purple crayons, I can see that I need two lots of 16, or  $16 \times 2$ .

$$16 \times 2 = 32$$

**There are 32 purple crayons.**

	T O
	1 6
x	2
	1 2
+	2 0
	3 2

- b) To find the number of crayons altogether, I can see that I need to add the yellow crayons and the purple crayons together.

$$16 + 32 = 48$$

**There are 48 crayons altogether.**

	T O
	1 6
+	3 2
	4 8

**DAY 4 RESOURCES:**

**THINK:** If you have online parent access, this lesson is based on textbook 3A, chapter 4, lesson 10.

Poppy has 36 marbles.

She has twice as many marbles as Rory has.

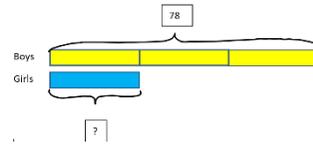
- How many marbles does Rory have?
- How many marbles do the children have altogether?

**DO:**

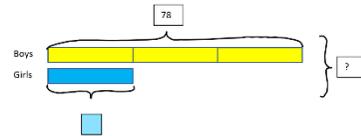
**Part 1:** Solve these problems. Use the bar models to help you work out what you need to do.

There are 78 boys in the playground. There are three times as many boys as there are girls in the playground.

- How many girls are there in the playground?



- How many children are there in the playground?



Check your answers below.

**Part 2:** Draw a bar model and solve each of these problems.

Remember to give your answer in a full sentence.

- There were 76 green balloons at a party. There were twice as many green balloons as orange balloons.
  - How many orange balloons were there?
  - How many balloons were there altogether?
- Ali has 68 football cards. Ali has four times as many as Noah. How many football cards do they have altogether?

**Deepening:**

Draw a bar model and solve this problem.

Remember to give your answer in a full sentence.

There are 3 times as many blue pens as red pens in a box.

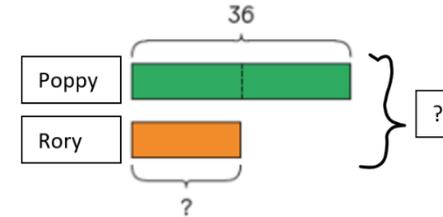
There are 56 blue and red pens in the box altogether.

How many blue pens are there?

**SEE:**

[Watch the lesson video here.](#)

Let's draw a bar model to help us understand what to do to solve the problem.



I know that Poppy has **twice** as many marbles as Rory, so Poppy has **two** lots of Rory's bar.

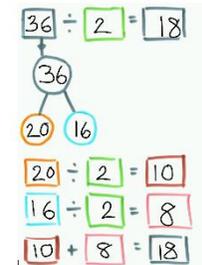
I know that Poppy has 36 marbles, so I can label this. I don't know how many Rory has so I label this with a question mark.

I also don't know how many marbles they have altogether, so I join the bar representing Poppy's marbles and the bar representing Rory's marbles together, and label this with a question mark.

- To find out how many marbles Rory has, I can see that I need to **divide** Poppy's 36 marbles by 2.

$$36 \div 2 = 18$$

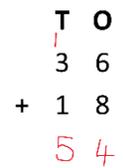
**Rory has 18 marbles.**



- To find out how many marbles they have altogether, I can see that I need to **add** Poppy's 36 marbles and Rory's 18 marbles.

$$36 + 18 = 54$$

**The children have 54 marbles altogether.**



**DAY 5 RESOURCES:**

**THINK:**

There are 100 cherries in a box.  
 There are 10 boxes in a row.  
 How many cherries are there in one row?  
 How many cherries are there in 10 rows?



**DO:**

Part 1:

Count and write the number shown.

- a) 
- b) 
- c) 

Check your answers before moving onto:

Part 2:

Complete the number patterns.

- a) 1,000, 2,000, \_\_\_\_\_, \_\_\_\_\_, 5,000, \_\_\_\_\_
- b) 9,000, \_\_\_\_\_, 7,000, \_\_\_\_\_, 5,000, \_\_\_\_\_
- c) 2,000, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 10,000
- d) \_\_\_\_\_, 4,000, \_\_\_\_\_, \_\_\_\_\_, 7,000

**Deepening:**

Create a poster showing and explaining how to count in thousands.  
 Keep it safe to give to your new year 4 teacher next year!

**SEE:**

[Watch the lesson video here.](#)

In Years 1, 2 and 3, you have used Dienes (hundreds, tens and ones) to make numbers.

In Year 4, you will use place value counters to make numbers.

10 ones = 1 ten  
 10 tens = 1 hundred  
 10 hundreds = 1 thousand

Let's find out how many cherries are in one row.



100, 200, 300, 400, 500, 600, 700, 800, 900, 1,000

There are 1,000 cherries in one row.

Let's find out how many cherries are in 10 rows.

	1,000 One thousand
	2,000 Two thousand
	3,000 Three thousand
	4,000 Four thousand
	5,000 Five thousand

	6,000 Six thousand
	7,000 Seven thousand
	8,000 Eight thousand
	9,000 Nine thousand
	10,000 Ten thousand
10 thousands	10 thousands = 10,000

There are 10,000 cherries in 10 rows.

## ANSWERS – part 1:

<u>Day 1</u>	<u>Day 2</u>	<u>Day 3</u>	<u>Day 4</u>	<u>Day 5</u>
a) $92 \div 2 = 46$ b) $72 \div 3 = 24$ c) $56 \div 4 = 14$ d) $75 \div 5 = 15$ e) $96 \div 4 = 24$	a) Holly picked 362 berries altogether. b) There are 44 fewer rubbers in Box B than in Box A.	a) There are 84 girls. b) There are 112 children altogether.	a) There are 26 girls in the playground. b) There are 104 children in the playground.	a) 3,000 b) 4,000 c) 10,000

## ANSWERS – part 2 and deepening:

<u>Day 1</u>	<u>Day 2</u>	<u>Day 3</u>	<u>Day 4</u>	<u>Day 5</u>
a) $78 \div 2 = 39$ b) $87 \div 3 = 29$ c) $68 \div 4 = 17$ d) $85 \div 5 = 17$ e) $96 \div 8 = 12$ f) $72 \div 3 = 24$  <u>Deepening:</u>  $84 \div 4 = 21$ $92 \div 4 = 23$ The difference was that when I solved $84 \div 4$ , I didn't need to regroup because 80 and 4 are both divisible by 4. When I solved $92 \div 4$ , I did need to regroup because 90 and 2 are not divisible by 4. I partitioned 92 into 80 and 12.	a) There are 406 pages in the book. b) There are 188 pears. c) There are 348 pupils in Sky Primary School.  <u>Deepening:</u>  Freya folds <b>more</b> paper aeroplanes than Elliott, which means that Elliott folds <b>less</b> paper aeroplanes. She needs to subtract to find out how many paper aeroplanes Elliott folds.  $216 - 39 = 177$  Elliott folds 177 paper aeroplanes.	Q1. a) He has 92 chickens. b) He has 138 sheep and chickens in total.  Q2. There are 195 beads altogether.  <u>Deepening:</u>  Answers will vary. Send your word problems to your teacher on Seesaw for checking.	Q1. a) There are 38 orange balloons. b) There are 114 balloons altogether.  Q2. They have 85 football cards altogether.  <u>Deepening:</u>  There are 42 blue pens in the box.	a) 1,000, 2,000, 3,000, 4,000, 5,000, 6,000 b) 9,000, 8,000, 7,000, 6,000, 5,000, 4,000 c) 2,000, 4,000, 6,000, 8,000, 10,000 d) 3,000, 4,000, 5,000, 6,000, 7,000  <u>Deepening:</u>  Send your poster to your teacher on Seesaw for checking.