

MATHEMATICS
Grade 4
English
Learner
Activity
Book

2020 TERM 1



Introduction

This resource pack has numbered daily activities for classwork and homework for all the lessons in Term 1. The activities correspond to the activities in the Lesson Plans.

Answers to the activities can be written in this book.

If learners work systematically through these maths activities, they will cover the whole curriculum. Hopefully these activities will be a fun way to help them acquire this maths knowledge.



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Lesson 24: Approximating numbers

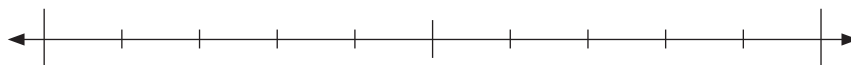
Mental maths

	What is ...	Answer		What is ...	Answer
1	$29 + 4 =$		6	$85 + 7 =$	
2	$71 + 9 =$		7	$58 + 8 =$	
3	$13 + 8 =$		8	$66 + 6 =$	
4	$33 + 7 =$		9	$79 + 2 =$	
5	$87 + 4 =$		10	$25 + 6 =$	

Activity 2

- 1 Use the number lines to round the price of each item to the nearest multiple of R10.

Scissors: R32



Between which two multiples of 10 does 32 lie?
Write the two numbers on the number line.
Write 32 on the number line.

R32 rounded to the nearest multiple of R10 is _____

Glue: R28

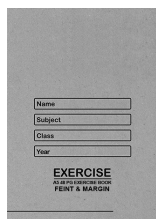


Between which two multiples of 10 does 28 lie?
Write the two numbers on the number line.
Write 28 on the number line.

R28 rounded to the nearest multiple of R10 is _____

Lesson 24: Approximating numbers

Exercise book: R14



Between which two multiples of 10 does 14 lie?

Write the two numbers on the number line.

Write 14 on the number line

R14 rounded to the nearest multiple of R10 is _____

- 2** You want to buy glue and an exercise book.
How much money do you need? R40 or R50? Why?

Activity 3

- 1** The farmer had 266 cows.
He told his friend that he had approximately 260 cows.

Is 260 an exact number or a rounded number? _____

Is 266 an exact number or a rounded number? _____

Use the number line to work out whether he rounded 266 to the nearest multiple of 10.



Between which two multiples of 10 does 266 lie?

Write the two numbers on the number line.

Write 266 on the number line.

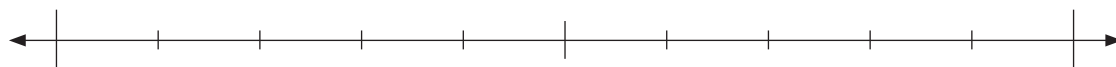
266 rounded to the nearest multiple of 10 is _____

Did he round to the nearest multiple of 10? _____

2 A newspaper and a TV programme reported the number of people at a football match.

- The newspaper said that 10 978 people went to watch the match.
- On the TV they said that 11 980 people went to watch the match.

A number line was used to round 10 978 to the nearest multiple of 10.



Between which two multiples of 10 does 10 978 lie?

Write the two numbers on the number line.

Write 10 978 on the number line.

Is 10 978 closer to 10 970 or 10 980? _____

Is 10 978 an exact number or a rounded number? _____

Is 10 980 an exact number or a rounded number? _____

HOMEWORK

- 1 Use the number line to show how you would round 327 to the nearest 10.



Between which two multiples of 10 does 327 lie?

Write the two numbers on the number line.

Write 327 on the number line.

327 rounded to the nearest 10 is _____

- 2 Use the number line to show how you would round 1 274 to the nearest 10.



Between which two multiples of 10 does 1 274 lie?

Write the two numbers on the number line.

Write 1 274 on the number line.

1 274 rounded to the nearest 10 is _____

- 3 Use the number line to show how you would round 1 696 to the nearest 10.



Between which two multiples of 10 does 1 696 lie?

Write the two numbers on the number line.

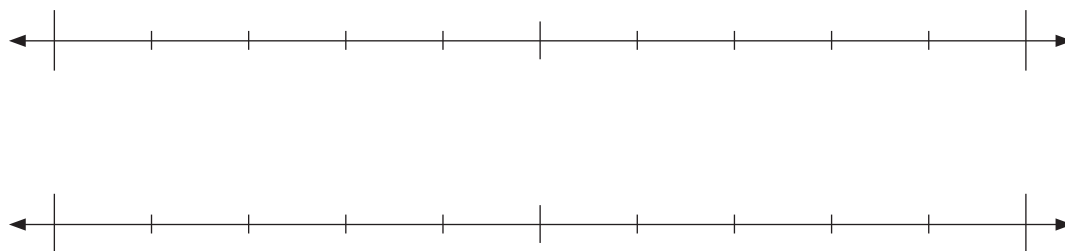
Write 1 696 on the number line.

1 696 rounded to the nearest 10 is _____

Lesson 25: Rounding to the nearest multiple of 10, rounding up and rounding down

Mental maths

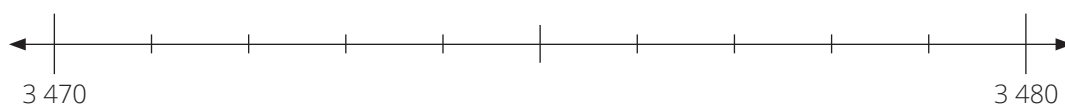
	Find the sum of	Answer		What is...	Answer
1	26 and 13		6	$25 + 20 =$	
2	71 and 18		7	$73 + 24 =$	
3	33 and 55		8	$66 + 32 =$	
4	69 and 30		9	$51 + 12 =$	
5	13 and 11		10	$31 + 43 =$	



Activity 2

Show the rounding process on each number line.

- Round 3 476 to the nearest 10.

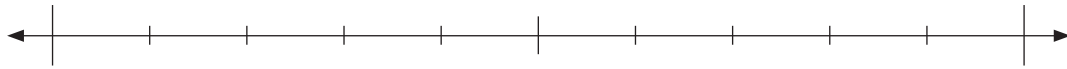


Answer _____

Lesson 25: Rounding to the nearest multiple of 10, rounding up and rounding down

2 Between which two multiples of 10 does 953 lie? _____

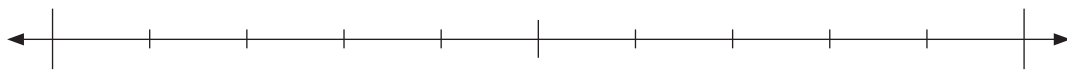
Write these two multiples of 10 on the number line.



Now round 953 to the nearest multiple of 10. _____

3 Between which two multiples of 10 does 4 564 lie? _____

Write these two multiples of 10 on the number line.



Now round 4 564 to the nearest multiple of 10. _____

Activity 3

1 Round 76 to the nearest multiple of 10.

Between which two multiples of 10 does 76 lie? _____

Which multiple of 10 is 76 closest to? _____

What is 76 rounded to the nearest multiple of 10? _____

Has 76 been rounded down or rounded up? _____

2 Round 953 to the nearest 10.

Between which two multiples of 10 does 953 lie? _____

Which multiple of 10 is 953 closest to? _____

What is 953 rounded to the nearest multiple of 10? _____

Has 953 been rounded down or rounded up? _____

Lesson 25: Rounding to the nearest multiple of 10, rounding up and rounding down

3 Round 4 569 to the nearest 10.

Between which two multiples of 10 does 4 569 lie? _____

Which multiple of 10 is 4 569 closest to? _____

What is 4 569 rounded to the nearest multiple of 10? _____

Has 4 569 been rounded down or rounded up? _____

HOMEWORK

1 Round 843 to the nearest multiple of 10.

Between which two multiples of 10 does 843 lie? _____

Which multiple of 10 is 843 closest to? _____

What is 843 rounded to the nearest multiple of 10? _____

Has 843 been rounded down or rounded up? _____

2 Round 3 686 to the nearest multiple of 10.



Between which two multiples of 10 does 3 686 lie? _____

What is 3 686 rounded to the nearest multiple of 10? _____

In this question did you round up or round down? _____

3 Round 65 466 to the nearest multiple of 10.



Between which two multiples of 10 does 65 466 lie?

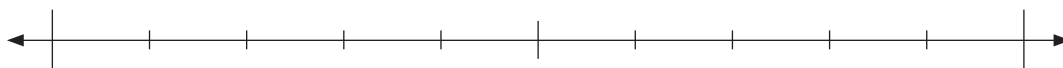
What is 65 466 rounded to the nearest multiple of 10? _____

In this question did you round up or round down? _____

Lesson 26: Rounding off to the nearest multiple of 100 and 1 000

Mental maths

	Which multiple of 10 is this number closest to?	Answer		Which multiple of 10 is this number closest to?	Answer
1	13		6	131	
2	46		7	199	
3	175		8	85	
4	53		9	79	
5	248		10	82	

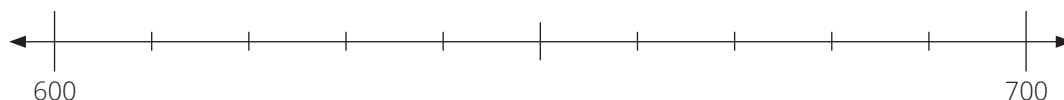


Activity 2

Round each number to the nearest multiple of 100.

- 1** Use a number line to round 682 to the nearest multiple of 100

Between which two multiples of 100 does 682 lie? _____



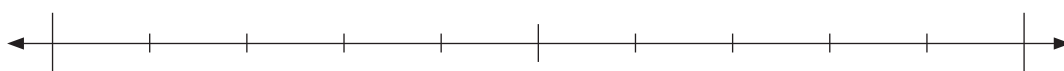
Write 682 on the number line.

Which multiple of 100 is 682 closer to? _____

What is 682 rounded to the nearest multiple of 100? _____

- 2** Use a number line to round 563 to the nearest multiple of 100

Between which two multiples of 100 does 563 lie? _____



Write 563 on the number line.

Which multiple of 100 is 563 closer to? _____

What is 563 rounded to the nearest multiple of 100? _____

- 3** Use a number line to round 3 849 to the nearest multiple of 100

Between which two multiples of 100 does 3 849 lie? _____



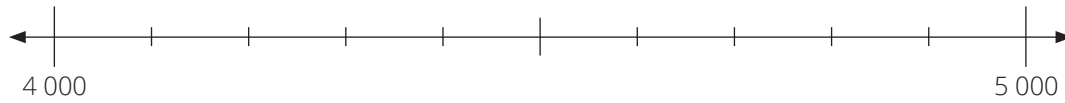
Write 3 849 on the number line.

Which multiple of 100 is 3 849 closer to? _____

What is 3 849 rounded to the nearest multiple of 100? _____

Activity 3

- 1** Use a number line to round 4 382 to the nearest multiple of 1 000.

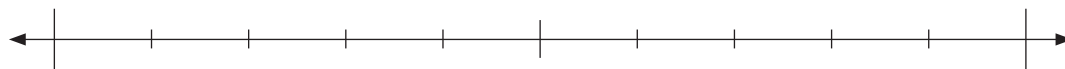


Which multiple of 1 000 is 4 382 closer to? _____

What is 4 382 rounded to the nearest multiple of 1 000? _____

- 2** Use a number line to round 8 543 to the nearest multiple of 1 000.

Between which two multiples of 1 000 does 8 543 lie? _____

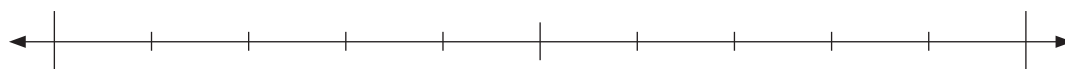


Which multiple of 1 000 is 8 543 closer to? _____

What is 8 543 rounded to the nearest multiple of 1 000? _____

- 3** Use a number line to round 9 849 to the nearest multiple of 1 000.

Between which two multiples of 1 000 does 9 849 lie? _____



Which multiple of 1 000 is 9 849 closer to? _____

What is 9 849 rounded to the nearest multiple of 1 000? _____

HOMEWORK

- 1** Use a number line to round 7 861 to the nearest multiple of 10

Between which two multiples of 10 does 7 861 lie? _____



What is 7 861 rounded to the nearest multiple of 10? _____

- 2** Use a number line to round 7 861 to the nearest multiple of 100

Between which two multiples of 100 does 7 861 lie? _____



What is 7 861 rounded to the nearest multiple of 100? _____

- 3** Use a number line to round 7 861 to the nearest multiple of 1 000

Between which two multiples of 1 000 does 7 861 lie? _____



What is 7 861 rounded to the nearest multiple of 1 000? _____

Lesson 27: The range of approximate numbers

Mental maths

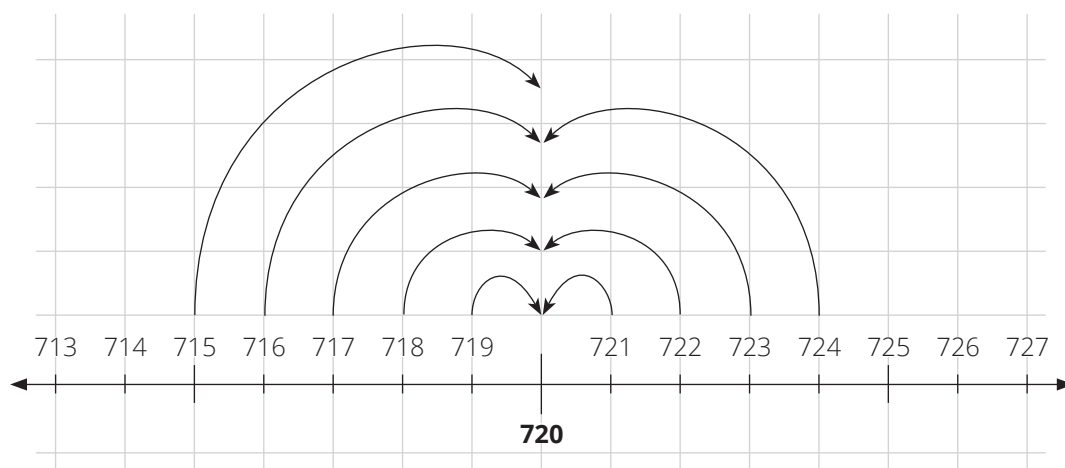
	Round off this number to the nearest 100.	Answer		Round off this number to the nearest 100.	Answer
1	165		6	519	
2	432		7	972	
3	650		8	49	
4	360		9	600	
5	198		10	701	

Activity 2

Use each number line to work out the range of the following approximate numbers.

An example has been done for you.

Example: Which numbers give 720 when rounded to the nearest multiple of 10?



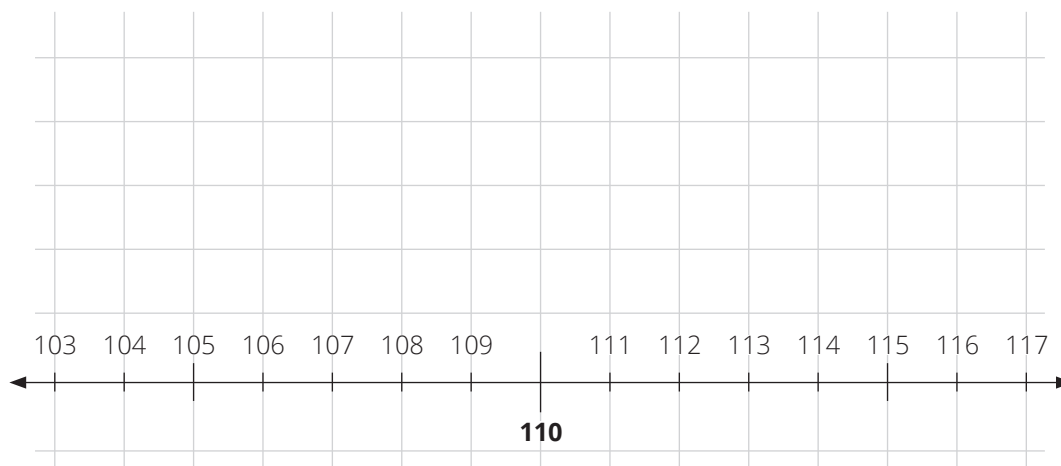
715; 716; 717; 718; 719; 720; 721; 723 and 724 all give 720 when rounded to the nearest multiple of 10.

The numbers are all greater than 714 and less than 725.

Lesson 27: The range of approximate numbers

- 1 Which numbers give 110 when rounded to the nearest multiple of 10?

Use the number line to find the answer.

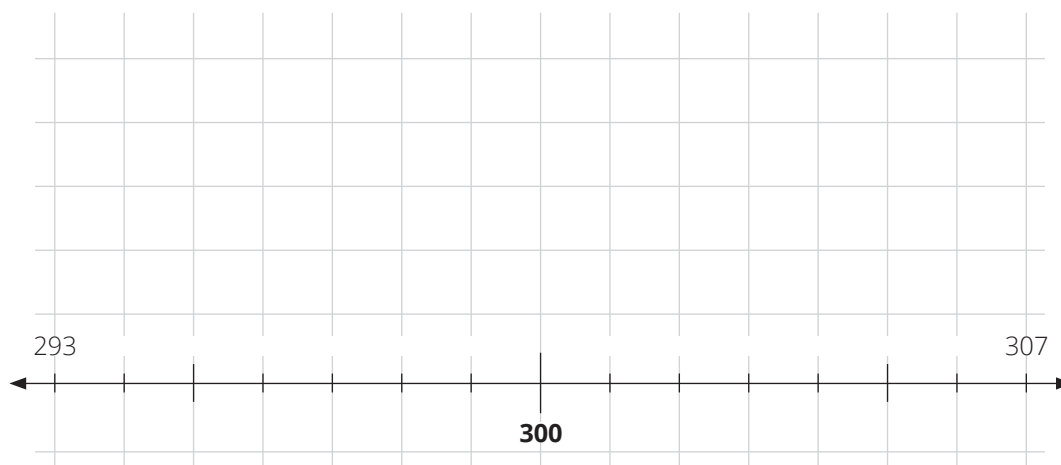


Numbers that give 110 when rounded to the nearest multiple of 10 are:

The numbers are all greater than _____ and less than _____

- 2 Which numbers give 300 when rounded to the nearest multiple of 10?

Use the number line to find the answer.

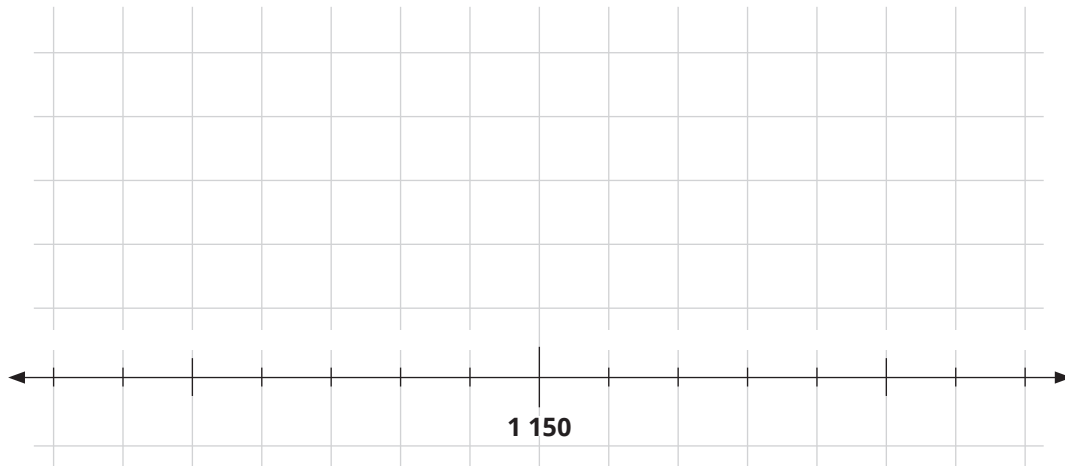


Numbers that give 300 when rounded to the nearest multiple of 10 are:

The numbers are all greater than _____ and less than _____

- 3** Which numbers give 1 150 when rounded to the nearest multiple of 10?

Use the number line to find the answer.



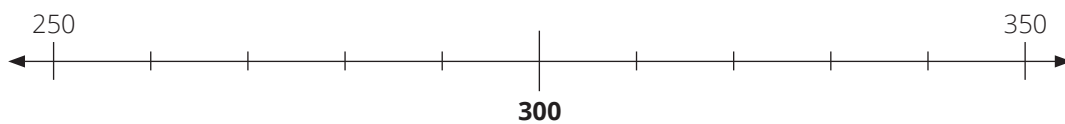
Numbers that give 1 150 when rounded to the nearest multiple of 10 are:

The numbers are all greater than _____ and less than _____

Activity 3

- 1** Which numbers give 300 when rounded to the nearest multiple of 100?

Use the number line to find the answer.



Write down five numbers that would give 300 when rounded to the nearest multiple of 100:

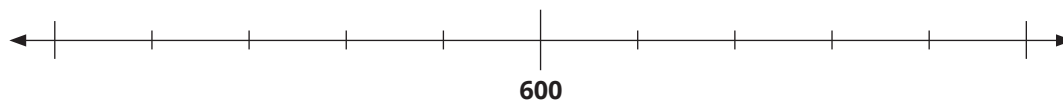
What is the range of numbers that give 300 when rounded to the nearest multiple of 100?

The range is greater than _____ and less than _____

Lesson 27: The range of approximate numbers

- 2** Which numbers give 600 when rounded to the nearest multiple of 100?

Use the number line to find the answer.



Write down five numbers that would give 600 when rounded to the nearest multiple of 100:

What is the range of numbers that give 600 when rounded to the nearest multiple of 100?

The range is greater than _____ and less than _____

- 3** Which numbers give 1 200 when rounded to the nearest multiple of 100?

Use the number line to find the answer.



Write down five numbers that would give 1 200 when rounded to the nearest multiple of 100:

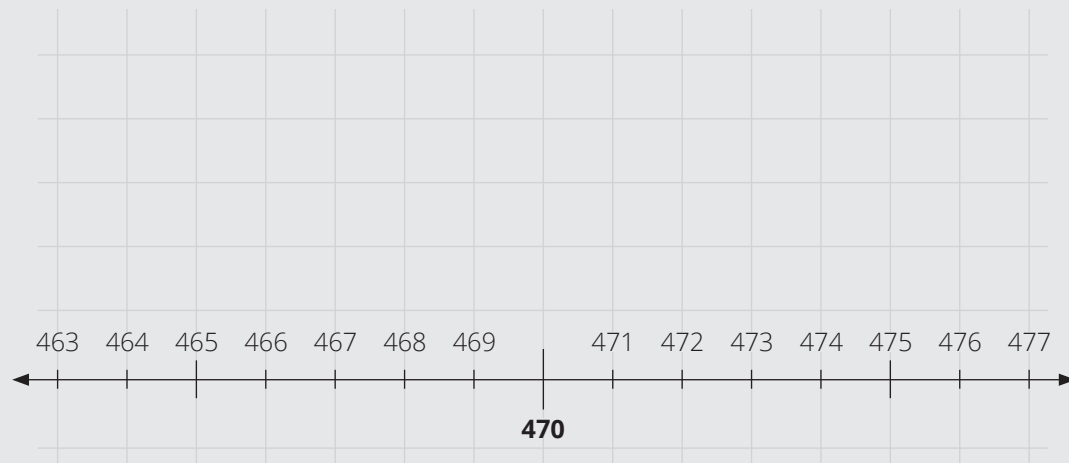
What is the range of numbers that give 1 200 when rounded to the nearest multiple of 100?

The range is greater than _____ and less than _____

HOMEWORK

1 Which numbers give 470 when rounded to the nearest multiple of 10?

Use the number line to find the answer.



Numbers that give 470 when rounded to the nearest multiple of 10 are:

The range is greater than _____ and less than _____

Lesson 27: The range of approximate numbers

- 2** Which numbers give 960 when rounded to the nearest multiple of 10?

Use the number line to find the answer.



Numbers that give 960 when rounded to the nearest multiple of 10 are:

The numbers are all greater than _____ and less than _____

- 3** Which numbers give 300 when rounded to the nearest multiple of 10?

Use the number line to find the answer.



Numbers that give 300 when rounded to the nearest multiple of 10 are:

The numbers are all greater than _____ and less than _____

Lesson 28: Using rules to round off numbers

Mental maths

	Round off this number to the nearest 1 000	Answer		Round off this number to the nearest 1 000	Answer
1	2 500		6	526	
2	2 499		7	7 456	
3	459		8	4 500	
4	7 759		9	1 687	
5	8 005		10	3 149	

Activity 1

- A waterfall is a place where water flows over the edge of a steep, high cliff in hills or mountains, and falls into a pool below.
- There are many high waterfalls in different countries in the world. The Tugela Falls which is in the Drakensburg in KZN is the second highest waterfall in the World.

Use the rule to round the height of each waterfall to the nearest ten metres

	Name of the waterfall	Country	Height in metres	Rounded to the nearest 10 metres
1.	Angel Falls	Venezuela	979	
2.	Tugela Falls	South Africa	948	
3.	Tres Hermanas Falls	Peru	914	
4.	Olo'upena Falls	Hawaii	900	
5.	Yumbilla Falls	Peru	896	
6.	Vinnufossen	Norway	860	

Activity 2

- Did you know? The Nile River which runs through Egypt is the longest river in the World.
- The Orange River in South Africa is the 62nd longest river in the World.

Round the lengths of the seven longest rivers in Africa to the nearest 100 km.

		Length	Rounded to the nearest 100 km
1.	Nile River	6 650 km	
2.	Congo River	4 705 km	
3.	Niger River	4 210 km	
4.	Zambezi River	2 693 km	
5.	Ubangi River	2 270 km	
6.	Kasai River	2 153 km	
7.	Orange River	2 092 km	

HOMework

- The exact number of mealies picked on Friday was 1 213.
Round the number of mealies to the nearest 10 _____
- Peter has saved R2 129.
Round this amount of money to the nearest R100 _____
- The exact distance between Place A and Place B is 1 650 kilometres.
Round the distance to the nearest 100 km _____

Lesson 29: Using rounded numbers when adding and subtracting

Mental maths

	Round off to the nearest 10	Answer		Round off to the nearest 100	Answer
1	563		6	487	
2	986		7	1 111	
3	6 344		8	3 000	
4	1 365		9	7 895	
5	2 508		10	5 049	

Activity 2

Calculate the approximate answer by rounding **BOTH** numbers to the nearest 10.

Example: $368 + 213 \rightarrow 370 + 210 = 580$

1 $86 + 62$

2 $353 + 248$

3 $413 + 369$

Lesson 29: Using rounded numbers when adding and subtracting

4 $564 - 327$

5 $1\,256 - 1\,109$

- 6** Mother had 194 apples. She sold 116 apples.
Approximately how many apples does she have left?
First write the number sentence:

Then find the approximate answer to the number sentence.

Activity 3

Calculate the approximate answer by rounding **BOTH** numbers to the nearest 100.

1 $243 + 278$

2 $386 + 558$

3 $413 + 369$

4 $564 - 327$

5 $1\,256 - 1\,109$

- 6** Tino is going on a journey.
The total distance is 1 224 kilometres.
Tino has driven 981 kilometres.
Approximately how many kilometres does Tino still have to drive?
First write the number sentence:

Then find the approximate answer to the number sentence.

HOMEWORK

- 1** Calculate the approximate answer.

Round each number to the nearest hundred.

$$673 - 252$$

→ _____

= _____

- 2** David had 752 marbles. He gave 146 marbles to his brother.

Approximately how many marbles does David have now?

First write the number sentence: _____

Then round each number to the nearest ten and find the answer.

- 3** Nina wants to buy a computer which costs R6 799 and a printer which costs R2 849.

Approximately how much will it cost for the computer and the printer?

First write the number sentence: _____

Then round each number to the nearest thousand and find the answer.

Lesson 30: Using rounded numbers when multiplying

Mental maths

	What is ...	Answer		What is ...	Answer
1	$3 \times 4 =$		6	$6 \times 3 =$	
2	$5 \times 6 =$		7	$5 \times 0 =$	
3	$7 \times 10 =$		8	$9 \times 8 =$	
4	$8 \times 8 =$		9	$10 \times 1 =$	
5	$3 \times 9 =$		10	$5 \times 9 =$	



Activity 2

- 1 Round each number to the nearest 10 and then work out the approximate answer.

a 7×57

→ _____

= _____

b 41×18

→ _____

= _____

c 85×14

→ _____

= _____

- 2 Round the first number to the nearest 100 and the second number to the nearest 10.
Then find the approximate answer.

123×15

→ _____

= _____

Activity 3

- 1** The distance from Siya's house to school and back is 6 kilometres.
If Siya goes to school for 196 days in the year,
what is the approximate distance he would walk each year?

Write the number sentence for the word problem:

Work out the approximate answer by rounding each number to the nearest 10:

Answer: Siya will walk approximately _____ kilometres each year.

- 2** In winter when there is no grass for the cows to eat, Farmer Maria feeds her cows hay.
Each cow eats 13 kilograms of hay per day.
Approximately how much hay will 28 cows eat in a day?

Write the number sentence for the word problem:

Work out the approximate answer by rounding each number to the nearest 10:

Answer: 28 cows will eat approximately _____ kilograms of hay in a day.

Lesson 30: Using rounded numbers when multiplying

- 3** There are 32 apples in a box.
Approximately how many apples will there be in 96 boxes?

Write the number sentence for the word problem:

Work out the approximate answer by rounding each number to the nearest 10:

Answer: There will be approximately _____ apples in 96 boxes.

HOMEWORK

1 Find the approximate answer by rounding each number to the nearest ten before you multiply

a 9×56

→ _____

= _____

b 17×36

→ _____

= _____

c 35×72

→ _____

= _____

d 19×104

→ _____

= _____

Lesson 30: Using rounded numbers when multiplying

- 2** One hen lays 18 eggs per month.
Approximately how many eggs will 58 hens lay in a month?

Write the number sentence:

Work out the approximate answer by rounding each number to the nearest 10:

Answer: 58 hens will lay approximately _____ eggs in a month.

Lesson 31: Using rounded numbers when dividing

Mental maths

	What is ...	Answer		What is ...	Answer
1	$4 \times 4 =$		6	$8 \times 8 =$	
2	$5 \times 5 =$		7	$2 \times 9 =$	
3	$9 \times 9 =$		8	$4 \times 10 =$	
4	$6 \times 6 =$		9	$10 \times 10 =$	
5	$7 \times 7 =$		10	$6 \times 9 =$	

Activity 2

Find the approximate answer:

Round the first number to the nearest 100.

Round the second number to the nearest 10.

1 $643 \div 27 = \square$

2 $459 \div 247 = \square$

3 $3\,246 \div 83 = \square$

4 $6\,347 \div 698 = \square$

Activity 3

- 1** Masudu planted 178 tomato plants.
He plants the tomato plants in rows.
If there are 7 tomato plants in a row, approximately how many rows will he have?

Write the number sentence: _____

Work out the approximate answer by rounding each number to the nearest 10:

Approximately how many rows of tomato plants will Masudu have? _____

- 2** Vuyo has 356 apples.
He wants to put 16 apples in a packet
Approximately how many packets can he fill?

Write the number sentence: _____

Work out the approximate answer by rounding each number to the nearest 10:

Approximately how many packets can Vuyo fill with apples? _____

- 3** There are 489 runners at the athletics competition.
There are 14 runners in each race.
Approximately how many races will be run?

Write the number sentence: _____

Work out the approximate answer by rounding the first number to the nearest 100 and the second number to the nearest 10:

Approximately how many races will be run? _____

HOMEWORK

- 1** Tom sells sweets.
He packs 18 sweets in a bag.
He has 159 sweets.
Approximately how many bags will Tom need?

Write the number sentence: _____

Work out the approximate answer by rounding each number to the nearest 10:

Answer: Tom will need approximately _____ bags.

- 2** There are 789 learners in the school.
There are 18 classes.
Approximately how many learners in each class?

Write the number sentence: _____

Work out the approximate answer by rounding the first number to the nearest 100 and the second number to the nearest 10:

Answer: There will be approximately _____ learners in each class.

- 3** There are 1 477 cars in the parking area.
There are 48 cars in each row.
Approximately how many rows are there?

Write the number sentence: _____

Work out the approximate answer by rounding the first number to the nearest 100 and the second number to the nearest 10:

Answer: There will be approximately _____ rows.

Lesson 32: Approximation by grouping

Mental maths

	Find the sum of	Answer		What is ...	Answer
1	23 and 71		6	$56 + 13 =$	
2	19 and 10		7	$41 + 41 =$	
3	34 and 43		8	$47 + 12 =$	
4	15 and 20		9	$16 + 63 =$	
5	74 and 21		10	$21 + 57 =$	

Activity 2

- 1** Find the approximate total of the following numbers:
 $673 + 320 + 128 + 869 + 994 + 500 + 510 + 403 + 613$

Group the numbers to make addition easier. Make number combinations of about 1 000.

What are the best combinations to make 1 000?

What is the approximate total?

- 2** Find the approximate total of the following numbers:
 $210 + 740 + 410 + 580 + 980 + 380 + 630$

What are the best combinations to make 1 000?

Approximately what is the total?

Activity 3

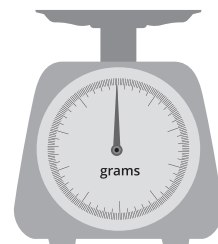
- 1 Siya's class collected bottle tops for 6 weeks. They recorded the number of bottle tops in a table. Use grouping to work out approximately how many bottle tops they collected altogether.

Week	1	2	3	4	5	6
Number of bottle tops	28	68	13	84	53	45

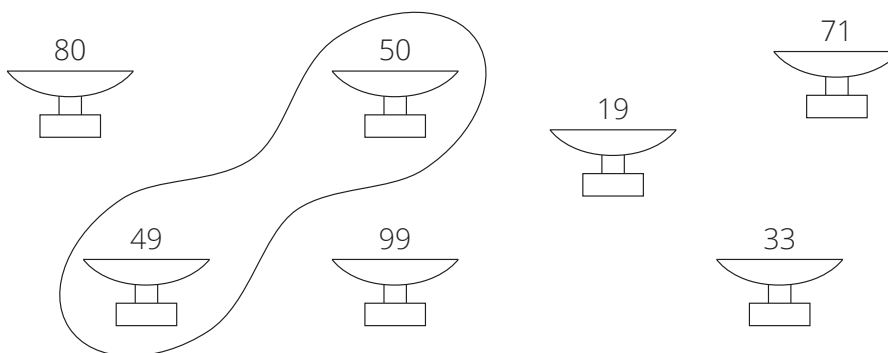
What are the best combinations to make 1 000?

Approximately how many bottle tops did Siya's class collect?

- 2 Siza used a mass meter (or scale) to measure the mass, in grams, of seven different items. Use grouping to work out the approximate total mass of all the items. One number combination has been done for you.



Mass-meter or scale



What are the best combinations to make 100?

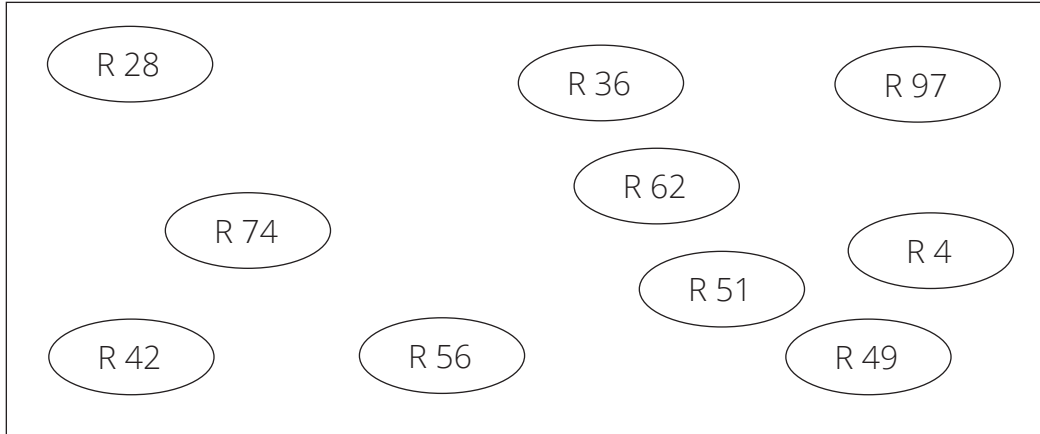
What is the approximate total mass?

Lesson 32: Approximation by grouping

3 Mother is going shopping.

Here are the prices for things Mother wants to buy.

Use grouping to work out approximately how much money Mother needs.

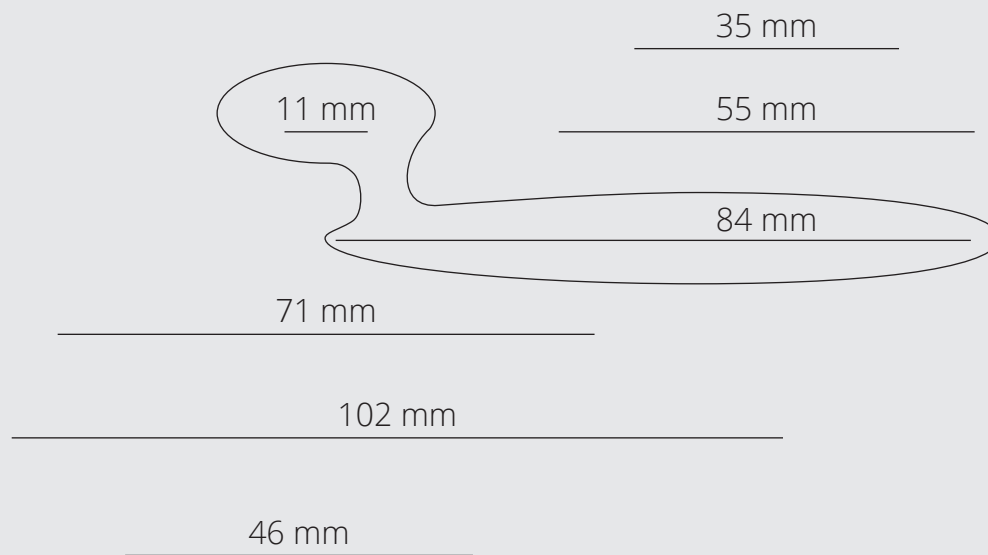


What are the best combinations to make 100?

Approximately how much money does Mother need?

HOMEWORK

- 1** The lengths of seven lines are shown below.
Use grouping, making number combinations of about 100 mm, to work out the approximate total length of the lines.



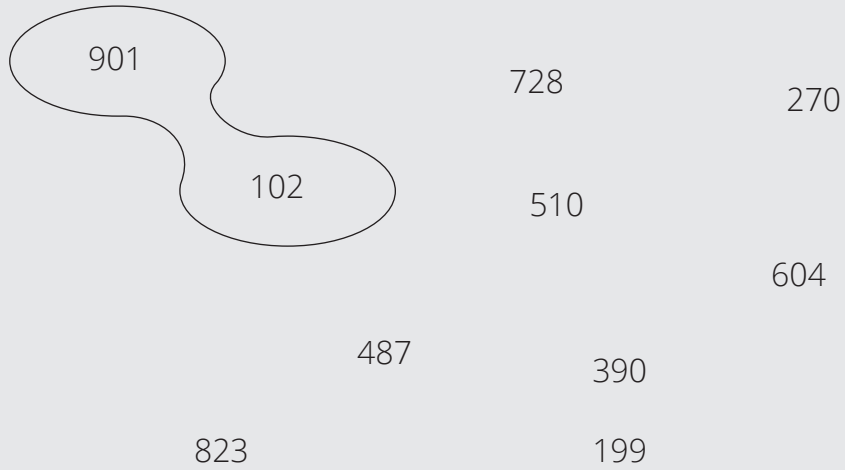
What are the best combinations to make 100?

What is the approximate total length of the seven lines?

Lesson 32: Approximation by grouping

- 2** What is the approximate total of these numbers?
Use grouping, making number combinations of about 1 000.

901 and 102 have already been grouped for you.



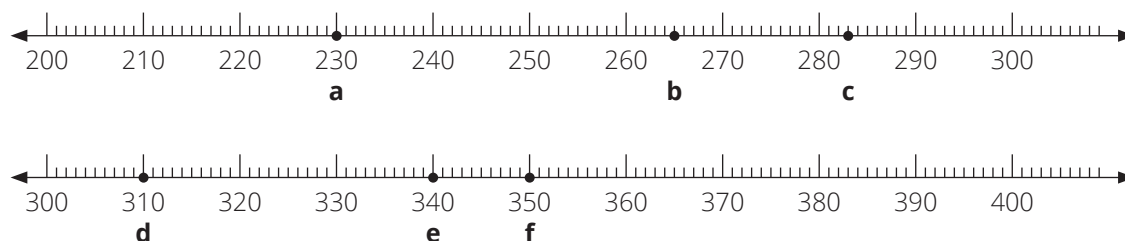
901 and 102 have already been grouped for you.

What are the best combinations to make 1 000?

What is the approximate total of the numbers?

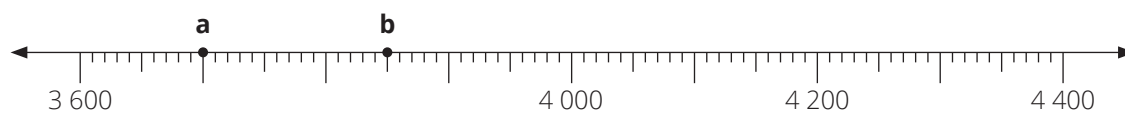
Lesson 33: Consolidation

1 Round off the numbers shown by a dot to the nearest 100.



	Number at the dot	Number at the dot rounded to the nearest 100
a		
b		
c		
d		
e		
f		

2 Round off the numbers shown by a dot to the nearest 1 000



	Number at the dot	Number at the dot rounded to the nearest 1 000
a		
b		

Lesson 33: Consolidation

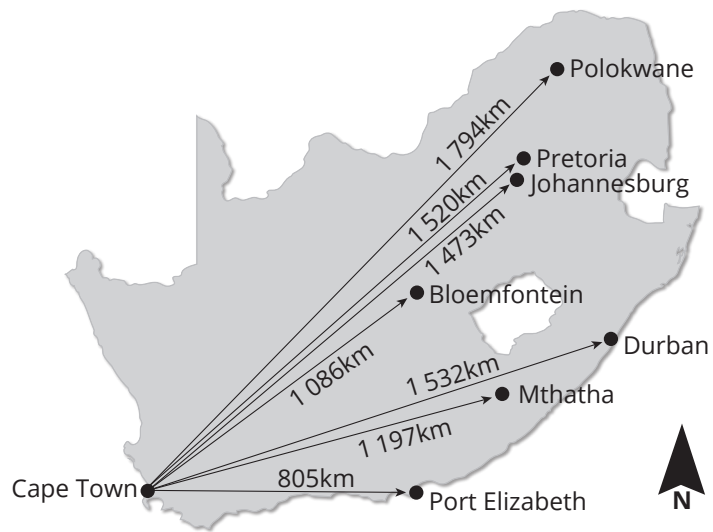
- 3 What is the approximate answer to $1\ 567 + 2\ 473$ when each number is rounded to the nearest 1 000?

Working out: _____

Circle the correct answer.

a. About 2 000	b. About 3 000	c. About 4 000	d. About 5 000
-----------------------	-----------------------	-----------------------	-----------------------

- 4 Work out the approximate distance of each of these South African towns and cities from Cape Town. Round each distance to the nearest 100 kilometres.



Cape Town to Polokwane is about _____ km

Cape Town to Pretoria is about _____ km

Cape Town to Johannesburg is about _____ km

Cape Town to Bloemfontein is about _____ km

Cape Town to Durban is about _____ km

Cape Town to Mthatha is about _____ km

Cape Town to Port Elizabeth is about _____ km.

Lesson 34: Seeing patterns

Mental maths

	What is ...	Answer		What is ...	Answer
1	$7 + 6 =$		6	$8 + 5 =$	
2	$9 + 7 =$		7	$6 + 9 =$	
3	$8 + 8 =$		8	$9 + 5 =$	
4	$9 + 4 =$		9	$7 + 7 =$	
5	$9 + 9 =$		10	$8 + 9 =$	

Activity 1



Activity 2

Example: 145; 150; 155; ; ;

What is the rule? Start at 145. 'Count forwards in 5s' or 'Add 5'

Use the rule to write the next 3 numbers in the pattern:

145; 150; 155; 160; 165; 170

1 670; 680; 690; ; ;

What is the rule? _____

Use the rule to write the next 3 numbers in the pattern:

670; 680; 690; _____ ; _____ ; _____

2 645; 545; 445; ; ;

What is the rule? _____

Use the rule to write the next 3 numbers in the pattern:

645; 545; 445; _____ ; _____ ; _____

Lesson 34: Seeing patterns

3 997; 992; 987; ; ;

What is the rule? _____

Use the rule to write the next 3 numbers in the pattern:

997; 992; 987; _____ ; _____ ; _____

4 657; 757; 857; ; ;

What is the rule? _____

Use the rule to write the next 3 numbers in the pattern:

657; 757; 857; _____ ; _____ ; _____

5 740; 730; 720; ; ;

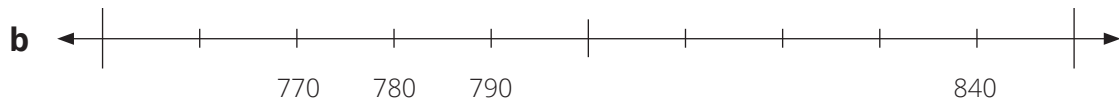
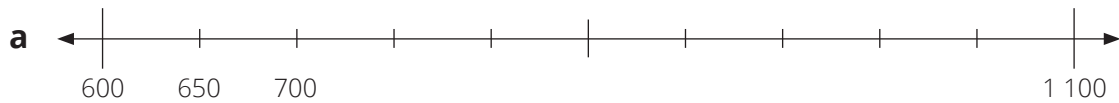
What is the rule? _____

Use the rule to write the next 3 numbers in the pattern:

740; 730; 720; _____ ; _____ ; _____

Activity 3

1 Write all the missing numbers on the number lines.



2 Fill in the missing numbers in each number pattern:

a 274; 279; 284; _____ ; 294; _____ ; _____

b 2 278; 2 288; _____ ; _____ ; 3 018

c 796; _____ ; 800; 802; _____ ; 806; _____ ; 810

HOMEWORK

1 470; 472; ; ; 478

What is the rule? _____

Use the rule to write the next 3 numbers in the pattern:

470; 472; _____ ; _____ ; 478

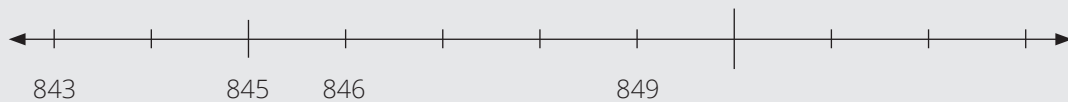
2 22; ; ; 16; ; 12; 10

What is the rule? _____

Use the rule to write the next 3 numbers in the pattern:

22; _____ ; _____ ; 16; _____ ; 12; 10

3 Fill in the missing numbers on the number line:



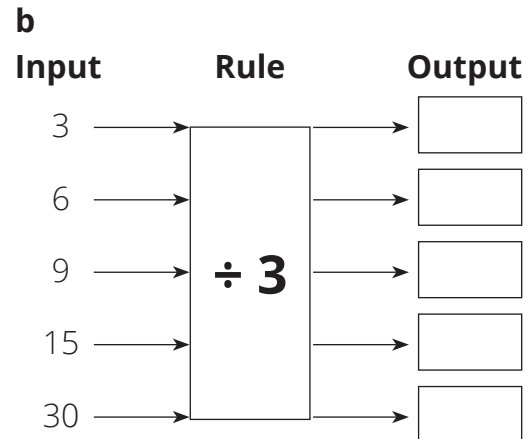
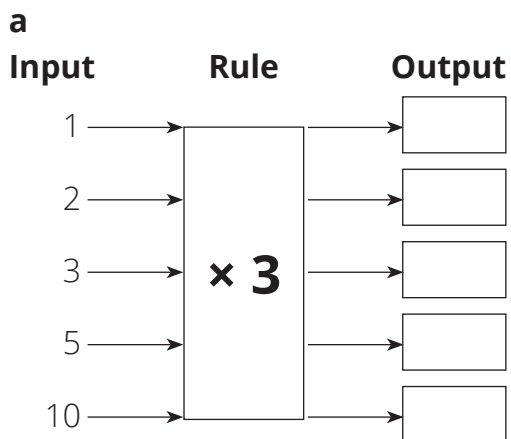
Lesson 35: Number patterns and flow diagrams

Mental maths

	Find the difference between	Answer		What is...	Answer
1	13 and 4		6	$15 - 7 =$	
2	16 and 8		7	$18 - 9 =$	
3	14 and 9		8	$14 - 6 =$	
4	13 and 4		9	$13 - 8 =$	
5	16 and 7		10	$15 - 9 =$	

Activity 2

1 Complete the flow diagrams



c

Input	Rule	Output
1	× 5	<input type="text"/>
2		<input type="text"/>
3		<input type="text"/>
5		<input type="text"/>
10		<input type="text"/>
		<input type="text"/>

d

Input	Rule	Output
5	÷ 5	<input type="text"/>
10		<input type="text"/>
15		<input type="text"/>
25		<input type="text"/>
50		<input type="text"/>
		<input type="text"/>

e

Input	Rule	Output
1	× 10	<input type="text"/>
<input type="text"/>		20
3		<input type="text"/>
<input type="text"/>		20
10		<input type="text"/>
		<input type="text"/>

f

Input	Rule	Output
3	× 100	<input type="text"/>
<input type="text"/>		200
<input type="text"/>		300
5		<input type="text"/>
10		<input type="text"/>
		<input type="text"/>

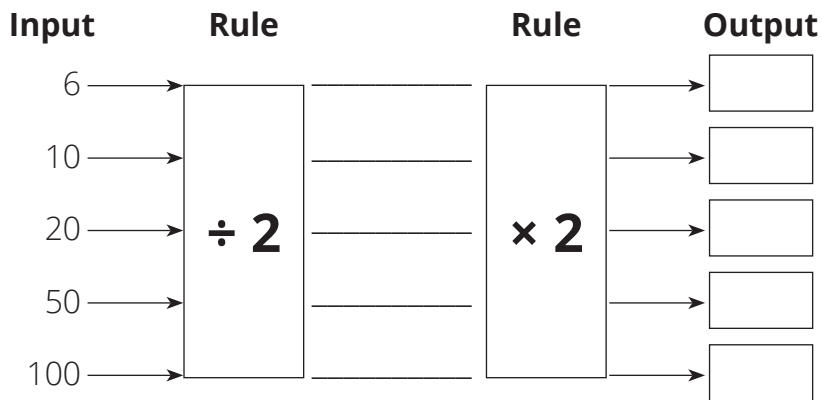
Activity 3

- Complete the flow diagram by writing the output numbers on the flow diagram.

Input	Rule	Output
2	Double	<input type="text"/>
4		<input type="text"/>
10		<input type="text"/>
25		<input type="text"/>
100		<input type="text"/>
		<input type="text"/>

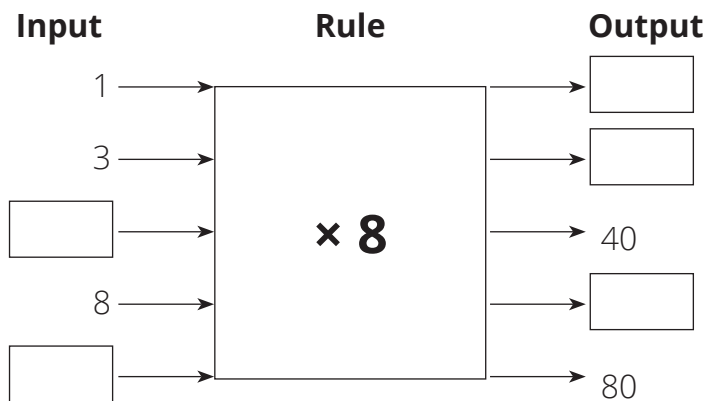
Lesson 35: Number patterns and flow diagrams

- 2** This flow diagram has two rules: first divide by 2 and then multiply the answer by 2.
Complete the flow diagram by writing the output numbers on the flow diagram.



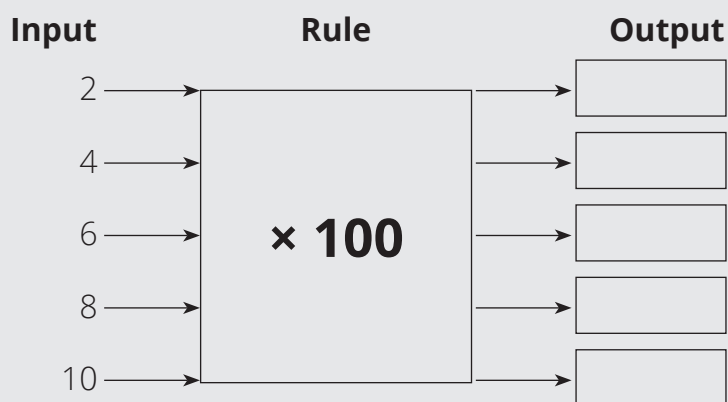
What do you notice about each input number and its matching output number? Why?

- 3** Complete the flow diagram by writing the output numbers on the flow diagram.

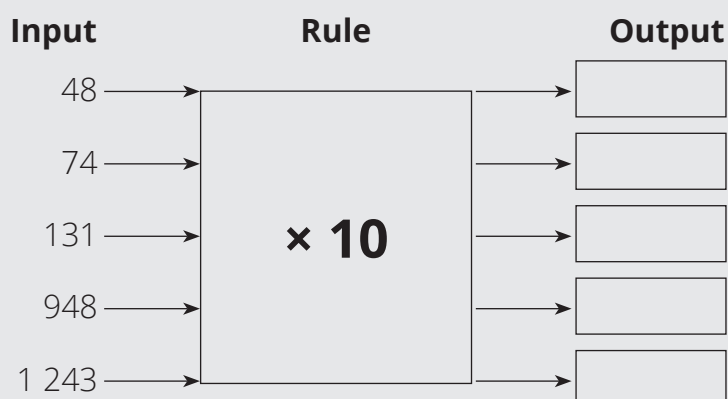


HOMEWORK

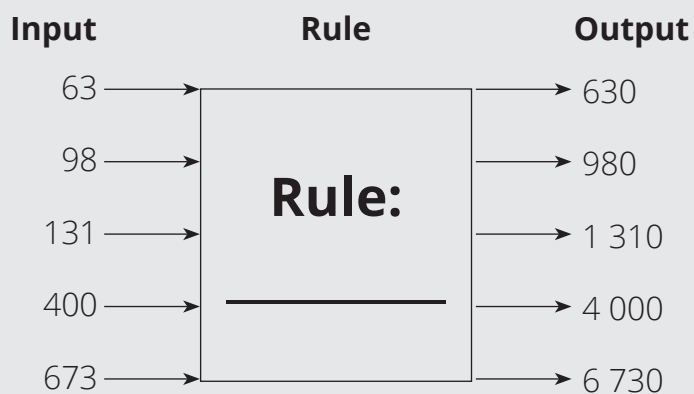
- 1 Complete the flow diagram by writing the output numbers on the flow diagram.



- 2 Complete the flow diagram by writing the output numbers on the flow diagram.



- 3 Fill in the rule in this flow diagram.

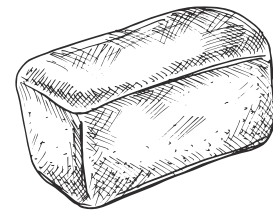


Lesson 36: Number patterns and tables

Mental maths

	What is	Answer		What is	Answer
1	$5 \times 4 =$		6	$10 \times 3 =$	
2	$9 \times 6 =$		7	$8 \times 6 =$	
3	$3 \times 7 =$		8	$9 \times 2 =$	
4	$5 \times 5 =$		9	$1 \times 10 =$	
5	$8 \times 4 =$		10	$9 \times 0 =$	

Activity 2



- 1** The table shows the cost of loaves of bread.
(Remember: we say 1 loaf of bread, many loaves of bread)

Number of loaves of bread	1	2	3	4	5	6	7	10	(20)
Cost (in Rand)	10	20							

- a** How much does one loaf of bread cost? _____
- b** Complete the table by writing in the missing values.
- c** Is the number of loaves of bread the input value or the output value?

- d** Is the cost (in Rand) the input value or the output value? _____
- e** What rule do we use to find the cost? _____
- 2** The rule for calculating the output numbers in this table from input numbers is: 'Add 4'.
Complete the table by filling in the missing input numbers.
The first one has been done as an example for you.

Input Numbers	1						
Output Numbers = Input Numbers + 4	5	7	10	30	103	302	1 004

Activity 3

- 1** Akhona wants to buy a new bicycle.
She manages to save R50 per week for the bicycle.



- a** Complete the table and then answer the questions.

Number of weeks	1	2	3	4	5	6	8	10	16
Amount Saved (In Rand)	50								

- b** The bicycle costs R800. How many weeks will it take Akhona to save enough money? _____

2

Input	6	12	18	54		600	
Output	1	2	3		10		1 000

Use the first two pairs of input numbers and output numbers to find the rule.

The rule is _____

Use the rule to complete the table.

HOMEWORK



1 There are four wheels on each car.

a Complete the table showing the number of wheels.

Number of cars	1	2	3	8	10	15	
Number of wheels = number of cars \times 4							100

b How many wheels do 8 cars have? _____

c How many wheels do 15 cars have? _____

d There are 100 wheels. How many cars? _____

2 The following table shows input and output values.

Input	5	10	15	20	40	50	100	1 000
Output	1	2	3	4	8	10	20	200

What is the rule for finding the output values from the input values?

The rule is _____

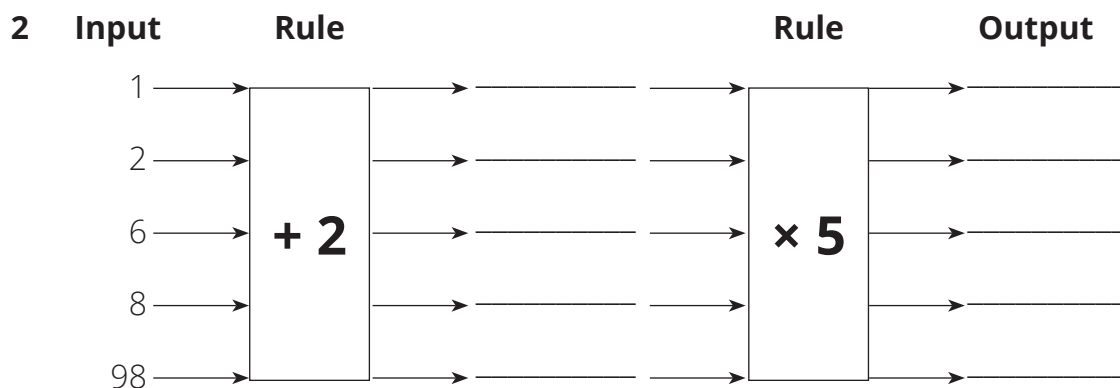
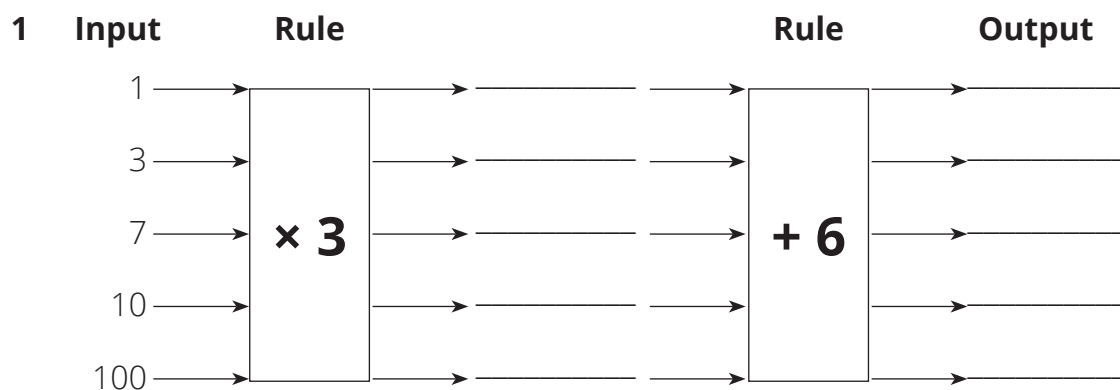
Lesson 37: Number patterns, flow diagrams and tables

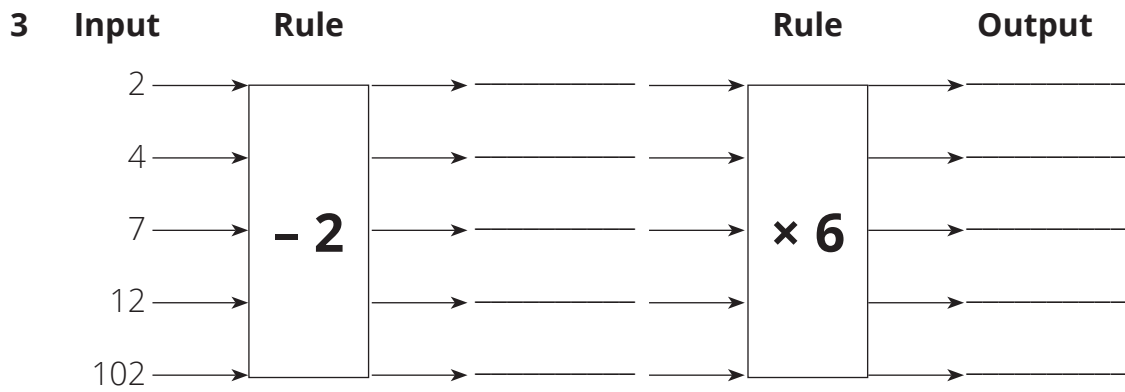
Mental maths

	What is ...	Answer		What is ...	Answer
1	$3 \times 7 =$		6	$10 \times 6 =$	
2	$4 \times 2 =$		7	$6 \times 9 =$	
3	$5 \times 7 =$		8	$0 \times 8 =$	
4	$7 \times 8 =$		9	$9 \times 5 =$	
5	$10 \times 1 =$		10	$9 \times 9 =$	

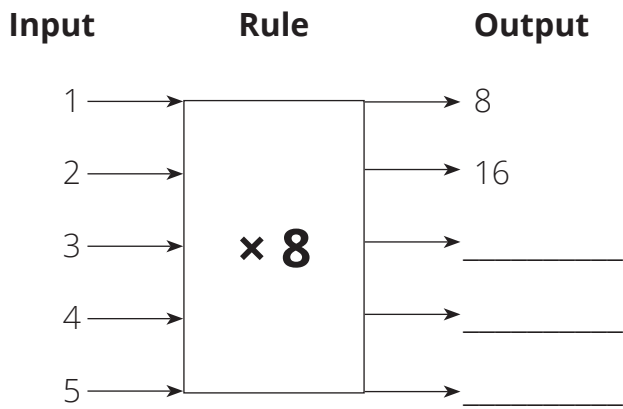
Activity 2

Complete the flow diagrams.





Activity 3



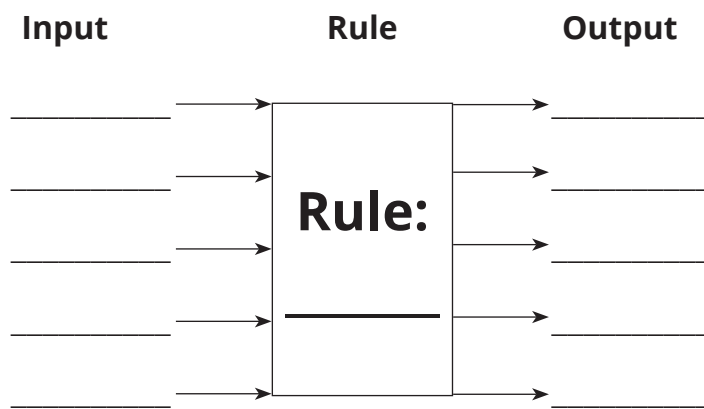
Number of bunches					
Amount (in Rand)					

1 Farmer Maria uses 20 metres of wire to make one cage for her hens.

a She used a flow diagram to show how much wire she would need to make 1 cage, 2 cages, 3 cages, 4 cages and 5 cages.

What are the input values? _____

b Write the input values on the flow diagram:



c What are the output values? _____

d What is the rule? _____

e Write the rule on the flow diagram and then write the output values for 1 cage, 2 cages, 3 cages, 4 cages and 5 cages.

f Farmer Maria also put all in the information in the following table:

Number of cages	1	2	3	4	5	6
Length of wire (metres)						

Fill in the missing information on the table.

Lesson 37: Number patterns, flow diagrams and tables

2 Complete these number patterns and say what the rule is.

a 1 028; 1 032; 1 036; _____; _____; _____; _____; _____;

What is the rule used to find this number pattern?

b 95 325; 95 225; 95 125; _____; _____; _____; _____;

What is the rule used to find this number pattern?

HOMEWORK

1 Complete these number patterns and say what the rule is.

a 324; 330; 336; _____; _____; _____; _____; _____

Rule? _____

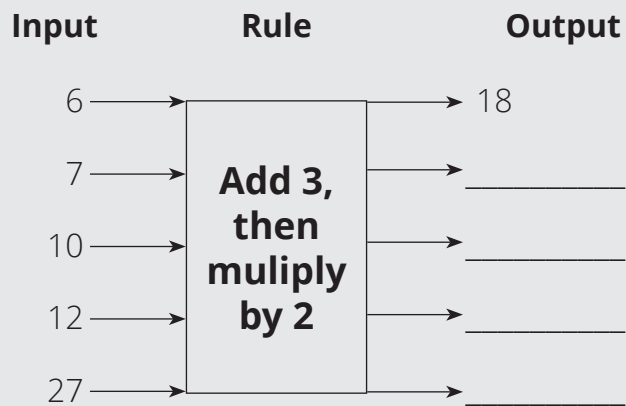
b 1 218; 1 238; 1 258; _____; _____; _____; _____; _____

Rule? _____

c 2 000; 1 990; 1 980; _____; _____; _____; _____; _____

Rule? _____

2 a Complete the flow diagram:



Lesson 38: Describe and extend geometric patterns

Mental maths




	What is ...	Answer		What is ...	Answer
1	$9 \times 5 =$		6	$7 \times 9 =$	
2	$10 \times 10 =$		7	$1 \times 9 =$	
3	$6 \times 8 =$		8	$3 \times 5 =$	
4	$4 \times 4 =$		9	$9 \times 9 =$	
5	$3 \times 8 =$		10	$8 \times 5 =$	

Activity 1



Activity 2

1 Study this pattern.

				
Picture 1	Picture 2	Picture 3	Picture 4	Picture 5

What shape is in Picture 1? _____

What shapes are in Picture 2? _____

What did we add to Picture 1 to get Picture 2? _____






What shapes are in Picture 3? _____

What did we add to Picture 2 to get Picture 3? _____

Write a rule for this pattern _____

Draw Picture 4 and Picture 5

- 2** These triangles are made with matchsticks.
Study the pattern.

				
Picture 1	Picture 2	Picture 3	Picture 4	Picture 5

How many matchsticks are used for Picture 1? _____

How many matchsticks are used for Picture 2? _____

How many matchsticks did we add to Picture 1 to get Picture 2? _____




How many matchsticks are used for Picture 3? _____

How many matchsticks did we add to Picture 2 to get Picture 3? _____

Write a rule for this pattern _____

Draw Picture 4 and Picture 5

- 3** These pictures are made with dots.
Study the pattern.

				
Picture 1	Picture 2	Picture 3	Picture 4	Picture 5

How many dots are used for Picture 1? _____

How many dots are used for Picture 2? _____

How many dots did we add to Picture 1 to get Picture 2? _____

How many dots are used for Picture 3? _____



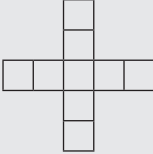
How many dots did we add to Picture 2 to get Picture 3? _____

Write a rule for this pattern _____

Draw Picture 4 and Picture 5

HOMEWORK

Study the pattern.

				
Picture 1	Picture 2	Picture 3	Picture 4	Picture 5

Describe the pattern. Use the word square in your description.

Draw Picture 4 and Picture 5

Lesson 39: From patterns to tables

Mental maths

	What is ...	Answer		What is ...	Answer
1	$2 \times 3 =$		6	$8 \times 8 =$	
2	$7 \times 5 =$		7	$6 \times 6 =$	
3	$6 \times 0 =$		8	$7 \times 7 =$	
4	$8 \times 7 =$		9	$4 \times 9 =$	
5	$6 \times 9 =$		10	$7 \times 3 =$	

			
Picture 1	Picture 2	Picture 3	Picture 4




Activity 1

			
Picture 1	Picture 2	Picture 3	Picture 4

Number of desks	1				
Number of learners	4				

Activity 2

1 This pattern is made with matchsticks.

				
Picture 1	Picture 2	Picture 3	Picture 4	Picture 5

a Name the geometric shape in this pattern. _____

b What changes from one shape to the next?

c Draw Pictures 4 and 5.

d Use Pictures 1 to 5 to fill in the Number of matchsticks

Picture number	1	2	3	4	5	6	7	8	10	20	100
Number of matchsticks	3										

e Think of a way of working out how many matchsticks there will be in Picture 6 without drawing and counting.

f Check your rule by drawing Picture 6 and counting the matchsticks.




Picture 6

- g** Work out how many matchsticks there will be in Pictures 7, 8, 10, 20 and 100.

Complete the table.

Picture number	1	2	3	4	5	6	7	8	10	20	100
Number of matchsticks	3										

- 2** This pattern is made from triangles.

					
Picture 1	Picture 2	Picture 3	Picture 4	Picture 5	Picture 6

- a** Draw Picture 4, Picture 5 and Picture 6.
b Explain how you got from Picture 3 to Picture 4.

- c** Describe the pattern.

- d** Complete this table.

Picture number	Number of triangles
1	1
2	$1 + 2 = 3$
3	$1 + 2 + 3 =$
4	
5	
6	

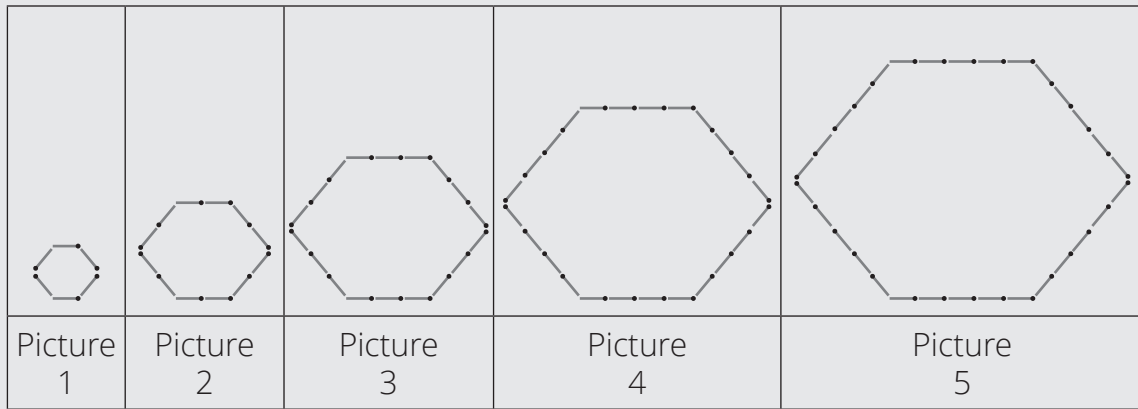
Lesson 39: From patterns to tables

e Now complete this table:

Picture number	1	2	3	4	5	6
Number of triangles	1	3				

HOMEWORK

This pattern is made with matchsticks.



1 How many sides in this geometric shape? _____

2 Explain how to get from Picture 4 to Picture 5.

3 Write the number of matchsticks in Picture 1, Picture 2, Picture 3, Picture 4 and Picture 5 in this table:

Diagram number	1	2	3	4	5
Number of matchsticks	3				

4 a How many matchsticks are in each side of Picture 6? _____


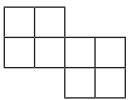
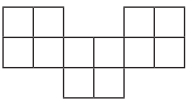
b How many matchsticks altogether in Picture 6?

Lesson 40: Geometric patterns and flow diagrams

Mental maths

	What is ...	Answer		What is ...	Answer
1	$7 \times 6 =$		6	$6 \times 3 =$	
2	$9 \times 9 =$		7	$2 \times 10 =$	
3	$10 \times 10 =$		8	$9 \times 5 =$	
4	$4 \times 5 =$		9	$7 \times 3 =$	
5	$8 \times 9 =$		10	$8 \times 8 =$	

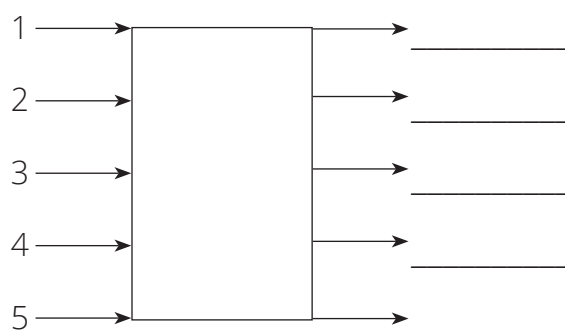
Activity 1

				
Picture 1	Picture 2	Picture 3	Picture 4	Picture 5

Number of big squares

Our rule




Number of tiles



Number of big squares	1	2	3	4	5	10
Number of tiles						

Activity 2

Look carefully at the pattern and then answer the questions.
Each Picture has been made with matchsticks.

				
Picture 1	Picture 2	Picture 3	Picture 4	Picture 5

- 1 Explain how to get from Picture 1 to Picture 2.

- 2 Explain how to get from Picture 2 to Picture 3.

- 3 Predict how to get from Picture 3 to Picture 4.

- 4 Predict how to get from Picture 4 to Picture 5.

- 5 Draw Picture 4 and Picture 5

- 6 Write the input and output values in the flow diagram after each question.

How many matchsticks are used to make Picture 1? _____

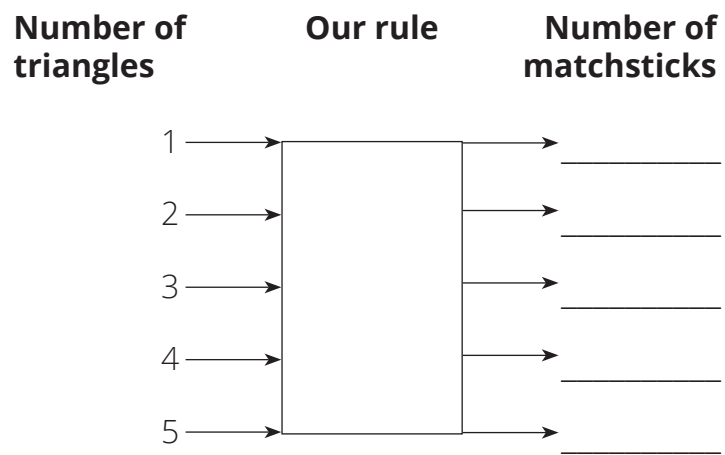
How many matchsticks are used to make Picture 2? _____

How many matchsticks are used to make Picture 3? _____

How many matchsticks are used to make Picture 4? _____




How many matchsticks are used to make Picture 5? _____

7 Write the rule on the flow diagram.



HOMEWORK

Look carefully at the pattern and then answer the questions.

				
Picture 1	Picture 2	Picture 3	Picture 4	Picture 5

1 Describe the pattern in your own words.

2 How many dots are used to make Picture 1? _____

How many dots are used to make Picture 2? _____

How many dots are used to make Picture 3? _____

3 Predict how many dots will be used for Picture 4.

Predict how many dots will be used for Picture 5.

4 Draw Picture 5 and Picture 6.

5 Was your prediction right? _____


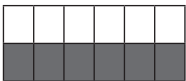



Lesson 41: More geometric patterns and tables

Mental maths

	What is ...	Answer		What is ...	Answer
1	$50 \div 10 =$		6	$81 \div 9 =$	
2	$18 \div 3 =$		7	$36 \div 4 =$	
3	$49 \div 7 =$		8	$14 \div 2 =$	
4	$48 \div 6 =$		9	$63 \div 9 =$	
5	$21 \div 3 =$		10	$50 \div 5 =$	

Activity 1

- 1 Mara is planning to tile her kitchen. She needs to find a way of working out how many grey tiles and white tiles she needs. She starts off by making smaller shapes and counting the numbers of tiles. She then makes bigger shapes and tries to work out a way of calculating the total number of tiles used.

		Number of grey tiles	Number of white tiles	Total number of tiles
Picture 1				
Picture 2				
Picture 3				
Picture 4				
Picture 5				

- 2 Mara did this to work out the number of white tiles in each example.

Number of white tiles = number of grey tiles \times 2

Is Mara's method correct? _____

Complete the following

Number of white tiles = _____


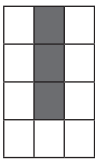
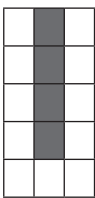
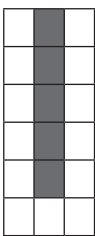
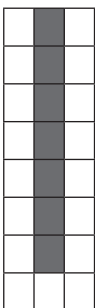
Total number of tiles = _____

- 3 Use the rule for working out the following:

Number of grey tiles	Number of white tiles	Total number of tiles
5		
	10	
20		

Activity 2

- 1 Pinky is planning to tile her bathroom. She needs to find a way of working out how many grey tiles and white tiles she needs. She starts off by making smaller Pictures and counting the numbers of tiles. She then makes bigger shapes and tries to work out a way of calculating the total number of tiles used.

		Number of grey tiles	Number of white tiles	Total number of tiles used
Picture 1				
Picture 2				
Picture 3				
Picture 4				
Picture 5				

- 2 Write a rule for working out the number of white tiles.

Lesson 41: More geometric patterns and tables






3 Write down a rule for working out the total number of tiles.

4 Use the rules for working out the following

Number of grey tiles	Number of white tiles	Total number of tiles
6		
7		
9		
10		
	7	

HOMEWORK

1 Here is another tiling pattern.

		Number of grey tiles	Number of white tiles	Total number of tiles used
Picture 1				
Picture 2				
Picture 3				
Picture 4				
Picture 5				

2 Write a rule for working out the number of grey tiles.

Lesson 41: More geometric patterns and tables

3 Write a rule for working out the total number of tiles.

4 Use the rules for working out the following

Number of grey tiles	Number of white tiles	Total number of tiles
2		
6		
9		
10		
	12	

Lesson 43: Writing and working with number sentences

Mental maths

	What is ...	Answer		What is ...	Answer
1	$8 \times 7 =$		6	$3 \times 0 =$	
2	$9 \times 8 =$		7	$8 \times 4 =$	
3	$6 \times 9 =$		8	$5 \times 9 =$	
4	$7 \times 3 =$		9	$10 \times 6 =$	
5	$5 \times 2 =$		10	$7 \times 7 =$	

Activity 2

- 1 Use + or – and = to write a number sentences for each of these.

Example: Write two number sentences which have 35 as the answer when we add two numbers.

Two possible answers: $30 + 5 = 35$ and $20 + 15 = 35$

- a** Write five number sentences which have 50 as the answer when we **add two numbers**.
- b** Write three number sentences which has 10 as the answer when we **subtract two numbers**.

2 Find the answers.

Remember that the placeholder \square stands for the answer you have to find.

a $234 + 16 = \square$

b $10 \times 7 = \square$

c $700 - 300 = \square$

Activity 3

For each word problem do these four things:

Write them on the board.

a Decide whether you are going to use + or - to find the answer

b Write a number sentence using +, -, = and \square

c Find the answer

d Write the answer using a sentence

1 Lindi bought cellphones to sell in her shop.

She bought 4 568 black cellphones and 2 428 silver cellphones.

How many cellphones did Lindi buy altogether?

a Are you going to use + or - ? _____

b. Write a number sentence using +, -, = and \square :

c. Use the column method to find the answer:

	Th	H	T	O

d. Write the answer using a sentence:

Lindi bought _____ cellphones altogether.

2 Amy collects marbles.
 She had 563 marbles, but then she loses 137 marbles.
How many marbles does Amy have left?

a Are you going to use + or - ? _____

b. Write a number sentence using +, -, = and \square :

c. Use the column method to find the answer:

	H	T	O

d. Write the answer using a sentence:

Amy has _____ marbles left.

Lesson 43: Writing and working with number sentences

3 The farm workers picked three thousand apples on Monday.
They picked two thousand apples on Tuesday.
How many apples did the farmworkers pick altogether?

a Are you going to use + or - ? _____

b. Write a number sentence using +, -, = and \square :

c. Find the answer:

d. Write the answer using a sentence:

The farmworkers picked _____ apples altogether.

HOMEWORK

- 1** Lesego collects plastic bottles for recycling.
She collected 78 bottles in January and 46 bottles in February.
How many more bottles did she collect in January than in February?
- a** Draw a circle around the number sentence that should be used to answer this question:
- $46 - 78 = \square$
- $46 + 78 = \square$
- $78 - 46 = \square$
- b.** Use the number sentence to calculate the answer:
- _____
- 2** There are 42 children in Grade 4A and 37 children in Grade 4B.
How many children are there altogether?
- a** Draw a circle around the number sentence that should be used to answer this question:
- $42 - 37 = \square$
- $42 + 37 = \square$
- $42 \times 37 = \square$
- b.** Use the number sentence to calculate the answer:
- _____

Lesson 44: Number sentences and patterns

Mental maths

	What is ...	Answer		What is ...	Answer
1	$4 \times 8 =$		6	$3 \times 10 =$	
2	$8 \times 6 =$		7	$2 \times 9 =$	
3	$4 \times 7 =$		8	$7 \times 5 =$	
4	$5 \times 5 =$		9	$6 \times 9 =$	
5	$9 \times 4 =$		10	$7 \times 3 =$	

Activity 2

Study the following number patterns.

- 1** Write a number in each placeholder that makes the number sentence true.

$$1 + \boxed{} = 10$$

$$10 + \boxed{} = 100$$

$$100 + \boxed{} = 1\,000$$

$$1\,000 + \boxed{} = 10\,000$$

- 2** Write a number in each placeholder that makes the number sentence true.

$$1 - \boxed{} = 1$$

$$100 - \boxed{} = 10$$

$$1\,000 - \boxed{} = 100$$

$$10\,000 - \boxed{} = 1\,000$$

- 3** Write a number in each placeholder that makes the number sentence true.

$$4 + 6 = \boxed{}$$

$$40 + 60 = \boxed{}$$

$$400 + 600 = \boxed{}$$

$$4\,000 + 6\,000 = \boxed{}$$

- 4 Write a number in each placeholder that makes the number sentence true.

$$\square - 4 = 6$$

$$\square - 40 = 60$$

$$\square - 400 = 600$$

$$\square - 4\,000 = 6\,000$$

Activity 3

Study the following number patterns.

- 1 Write a number in each placeholder that makes the number sentence true.

$$4 \times 10 = \square$$

$$40 \times 10 = \square$$

$$400 \times 10 = \square$$

$$4\,000 \times 10 = \square$$

$$40\,000 \times 10 = \square$$

- 2 True or False?

If it is false, re-write the sentence to make it true.

When you multiply a number by 10, there should always be at least one 0 (zero) in the One's place.

- 3 Write a number in each placeholder that makes the number sentence true.

$$4 \times \square = 4$$

$$40 \times \square = 40$$

$$400 \times \square = 400$$

$$4\,000 \times \square = 4\,000$$

$$40\,000 \times \square = 40\,000$$

- 4 True or False?

If it is false, re-write the sentence to make it true.

When you multiply any number by 1, the number changes.

Lesson 44: Number sentences and patterns

5 Write a number in each placeholder that makes the number sentence true.

$$3 + \square = 3$$

$$69 + \square = 69$$

$$356 + \square = 356$$

$$4\,672 + \square = 4\,672$$

$$87\,341 + \square = 87\,341$$

6 True or False?

If it is false, re-write the sentence to make it true.

When you add 0 to any number, the number stays the same.

HOMEWORK

1 Sally collected 43 bottles for recycling.
Sally's friend collected 10 times as many bottles.
How many bottles did Sally's friend collect?

a Write a number sentence to describe the word problem.

b. Do the calculation and find the answer

2 Are these number sentences true or false?

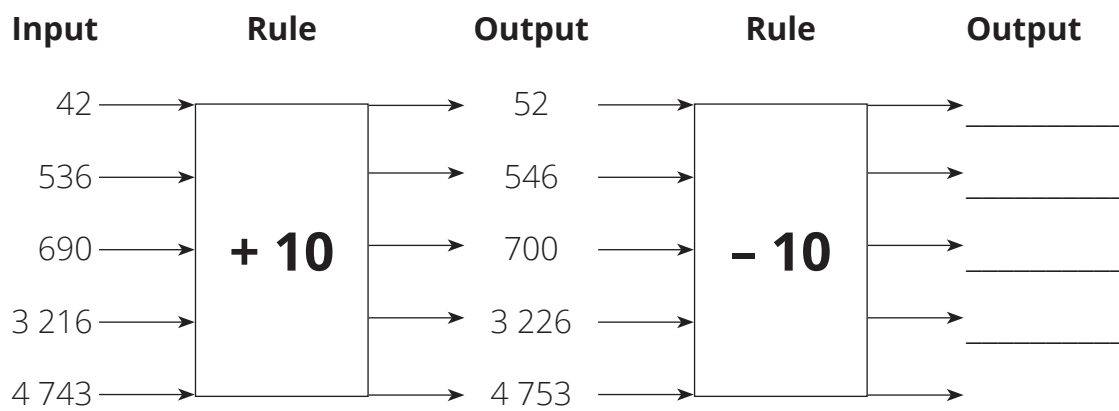
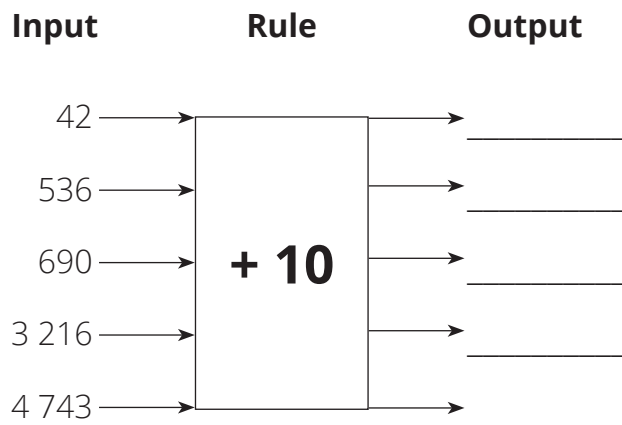
	Number sentence	True	False
a	$351 \times 10 = 35\,100$		
b	$351 + 0 = 351$		
c	$1\,678 \times 100 = 167\,800$		
d	$900 + 10 = 9\,000$		

Lesson 45: More number sentences (1)

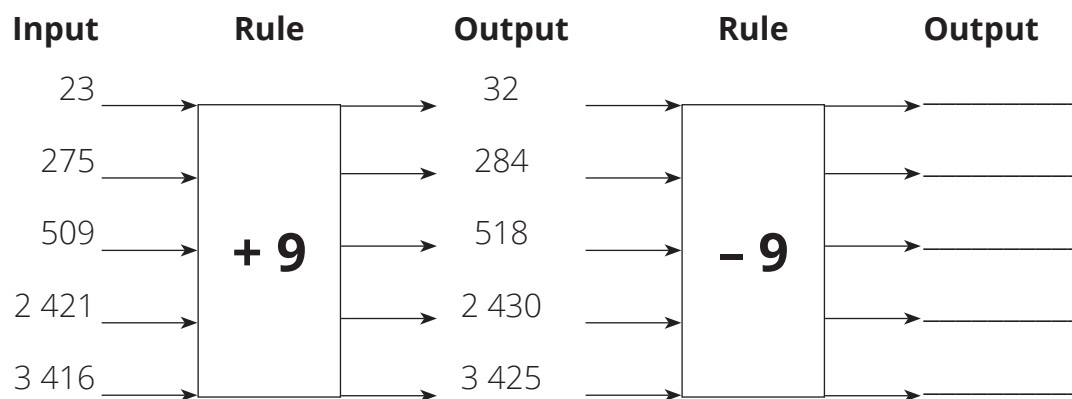
Mental maths

	What is ...	Answer		What is ...	Answer
1	$3 \times 7 =$		6	$9 \times 7 =$	
2	$8 \times 9 =$		7	$7 \times 9 =$	
3	$2 \times 10 =$		8	$4 \times 8 =$	
4	$7 \times 7 =$		9	$6 \times 9 =$	
5	$10 \times 1 =$		10	$5 \times 9 =$	

Activity 1



1 a Complete the flow diagram.



b Complete the sentences:

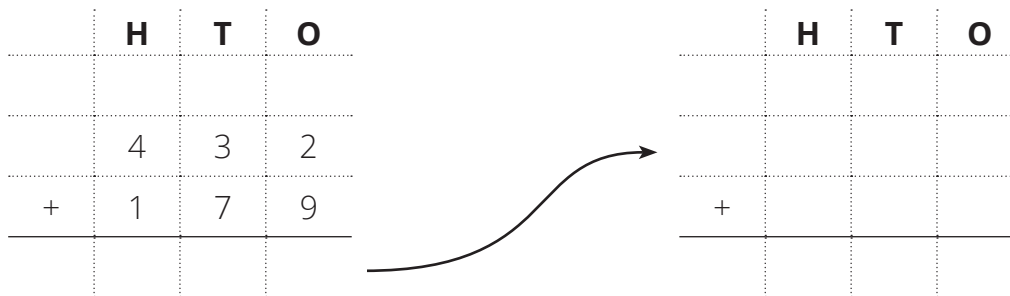
Subtraction of the same number will undo the operation of _____

Addition of the same number will undo the operation of _____

We can use _____ to check subtraction

We can use _____ to check addition

2 Calculate and then check your answer



Activity 2

1 Write a number in each placeholder that will make the sentence true

a $4 + 7 = \square$

b $7 + 4 = \square$

c $21 + \square = 36$

How do you know the placeholder is 15?

d $\square + 15 = 36$

e Discuss with your partner.

What do you notice about the answers to **a.** and **b.**?

What do you notice about the answers to **c.** and **d.**?

Start your answer like this:

When we add numbers, _____

2 True or false?

a $16 - 9 = 9 - 16$ _____

b We can add numbers in any order, but we cannot subtract numbers in any order.

HOMEWORK

- 1** Farmer Joe had 132 cows, and then bought 19 more cows. He wrote this number sentence to help him calculate how many cows he had altogether.

$$132 + 19 = \square$$

- a** Calculate how many cows Farmer Joe has altogether. Use the column method.

	H	T	O

- b** Show Farmer Joe how he can check his answer. Use the column method.

	H	T	O

- 2 a** Draw a circle around the number sentence you would use to find the number that is 218 less than 521:

$$521 - 218 = \square$$

$$218 + 521 = \square$$

$$218 - 521 = \square$$

- b** Use the column method to find the answer to your number sentence.

	H	T	O

Lesson 46: More number sentences (2)

Mental maths

	What is ...	Answer		What is ...	Answer
1	$3 \times 4 =$		6	$3 \times 9 =$	
2	$6 \times 4 =$		7	$4 \times 10 =$	
3	$6 \times 6 =$		8	$9 \times 5 =$	
4	$7 \times 6 =$		9	$8 \times 8 =$	
5	$4 \times 0 =$		10	$5 \times 4 =$	

Activity 2

Draw a circle around the grouping of numbers that makes the number sentence quick and easy to solve. Then solve the number sentence.

1 $37 + 63 + 49 = \square$

$(37 + 63) + 49 = \square$

$37 + (63 + 49) = \square$

Answer: _____

2 $59 + 1\,275 + 325 = \square$

$(59 + 1\,275) + 325 = \square$

$59 + (1\,275 + 325) = \square$

Answer: _____

Activity 3

1 Solve each number sentence.

Remember that the brackets show how the numbers are grouped and what you should do first.

a $(17 - 7) - 2 = \square$

= _____

= _____

b $17 - (7 - 2) = \square$

= _____

= _____

c Compare the number sentences and answers in **a.** and **b.**
What do you notice?

= _____

= _____

2 a Calculate: $149 + 51 =$ _____

b Calculate: $2 + 98 =$ _____

c Is $149 + 51 = 2 + 98$ true? _____

3 a Calculate: $12 \times 100 =$ _____

b Calculate: $6 \times 200 =$ _____

c Is $12 \times 100 = 6 \times 200$ true? _____

HOMEWORK

- 1** Solve each number sentence as quickly as you can.
Group the numbers to make the calculations easy.
Use brackets to show the order in which you worked.

a $98 + 69 + 102 = \square$

b $631 + 892 + 108 = \square$

- 2** Write the number that should replace the placeholder so that the left side and the right side have the same value.

a $13 + 7 = 1 + \square$

b $\square + 16 = 30 + 6$

Lesson 47: More number sentences (3)

Mental maths

	What is ...	Answer		What is ...	Answer
1	$9 \times 1 =$		6	$8 \times 7 =$	
2	$5 \times 7 =$		7	$6 \times 9 =$	
3	$9 \times 8 =$		8	$10 \times 0 =$	
4	$3 \times 6 =$		9	$5 \times 6 =$	
5	$4 \times 10 =$		10	$8 \times 4 =$	

Activity 2

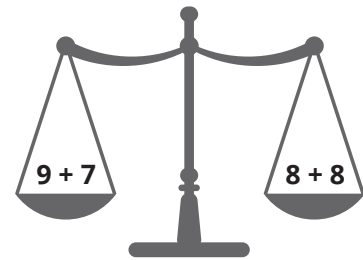
1 Complete the calculations.

a. $(567 + 10) - \square = 567$

b. $(1\ 347 + 1\ 000) - \square = 1\ 347$

2 Look carefully at the answers in question 1.
Write down what you notice about the calculations and the answers:

3 Why can we say that this diagram represents a number sentence that is true?



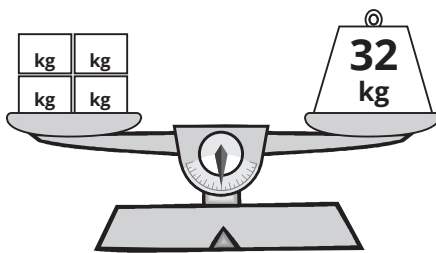
4 Write numbers in the placeholders to make these number sentences true:

a. $4 + 3 = 5 + \square$

b. $17 + 9 = \square + 26$

c. $100 + \square = 98 + 14$

Activity 3

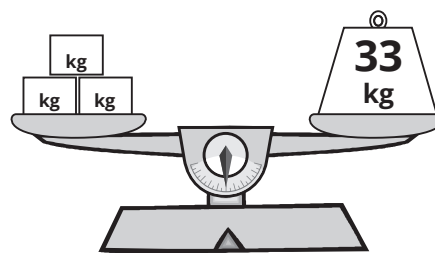


What is the mass of each box?

Lesson 47: More number sentences (3)

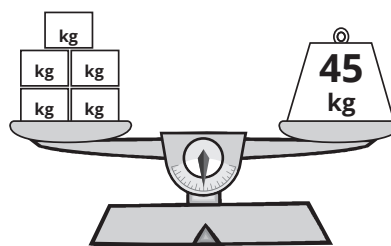
1 Use number sentences to solve the problems

- a** What is the mass of one box?
All the boxes have the same mass.
Let \square represent one box.
First write the number sentence.



Then find the answer.

- b** What is the mass of one box?
All the boxes have the same mass.
Let \square represent one box.
First write the number sentence.



Then find the answer.

2 Complete each number sentence. Remember that placeholders that are the same represent the same number in the number sentence.
You might need to test a few numbers to find the correct answers.?

a $\square + \square + \square + \square = 400$

b $\diamond \times \diamond = 100$

c $\Delta + \Delta + 8 = 38$

d $10 \times \square \times \square = 360$

HOMEWORK

Find the values of \square that make the number sentences true.

1 $25 + 0 = \square$

2 $37 + 49 = 49 + \square$

3 $103 + \square = 103$

4 $\square + 0 = 1\,234$

5 $(79 + 63) - \square = 79$

Lesson 47: More number sentences (3)

6 $(657 + 42) + 13 = 657 + (\square + 13)$

7 $1\,245 + \square = 1\,246$

8 $5 \times 2 = \square$

9 $4 \times 3 = \square$

10 $351 - 237 + 237 = \square$

Lesson 48: Consolidation

CONSOLIDATION ACTIVITIES

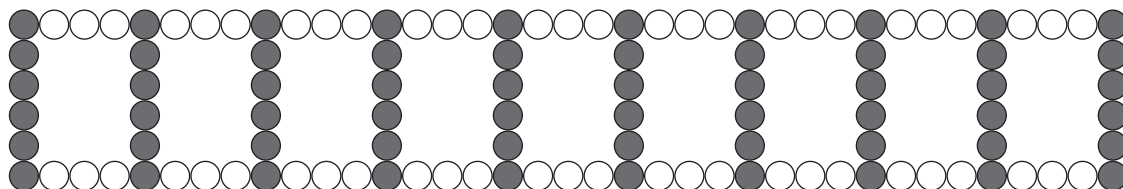
EXAMPLE

Amir, Jacob and Busi worked out how many beads in this string of beads.



- Amir saw the pattern as 5; 3; 5; 3; 5; 3; 5; 3. He counted the beads and added them together as he counted like this:
5; 8; 13; 16; 21; 24; 29; 32 beads.
- Jacob saw the pattern as 5 grey; 3 white; 5 grey; 3 white; 5 grey; 3 white; 5 grey; 3 white and wrote the number sentence
 $(4 \times 5 \text{ grey}) + (4 \times 3 \text{ white}) = 20 \text{ grey} + 12 \text{ white} = 32 \text{ beads}$.
- Busi added the white and black beads together: $5 + 3 = 8 \text{ beads}$.
She then wrote the number sentence $4 \times (5 + 3) = 4 \times 8 \text{ beads} = 32 \text{ beads}$.

1 How many beads in this pattern?



- a Use one of the children's method or one of your own to show how to find out the number of beads in the pattern without having to count one-by-one.

b Write a number sentence that you could use to find:

The number of white beads: _____

The number of grey beads: _____

The total number of beads: _____

Lesson 48: Consolidation

- 2 a** Use the column method to calculate $4\,692 - 1\,326 = \square$

	Th	H	T	O
	4	6	9	2
-	1	3	2	6
<hr/>				

- b** Show how you can check your answer.

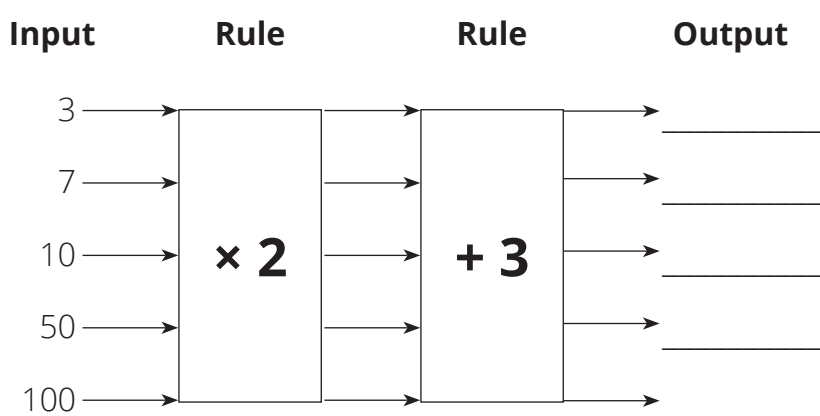
	Th	H	T	O
<hr/>				

- 3** Re-write one side of each of these number sentences to make them true:

a $6 + 6 = 4 \times 4$

b $1 + 4 = 4 + 0$

4 a Complete the flow diagram:



b Write a number sentence for the first pair of input and output numbers





