

1. Counting forward and backwards in multiples of a number as it is done regularly. In grade 3, counting only goes up to three digits. In grade 4, we will count up to 10 000. Learners must be able to count in multiples of 2s, 3s, 5s, 10s, 20s, 25s, 50s and 100s.

Remember, the number that comes after 999 is 1 000. That means if you're counting in 2s up to 998, the next number is 1 000. If you're counting in 3s up to 997, the next number is 1 000. The number of digits changes from three to four.

Example: Count forward and backwards in 5s from 960 to 1 005.

960; 965; 970; 975; 980; 985; 990; 995; 1 000; 1 005
1 005; 1 000; 995; 990; 985; 980; 975; 970; 965; 960

- a. Count forward and backwards in 2s from 430 to 450.
 - b. Count forward and backwards in 3s from 669 to 699.
 - c. Count forward and backwards in 5s from 115 to 165.
 - d. Count forward and backwards in 10s from 370 to 470.
 - e. Count forward and backwards in 25s from 1530 to 1 780.
 - f. Count forward and backwards in 50s from 3 540 to 4 040.
 - g. Count forward and backwards in 100s from 7 318 to 8 318.
2. The number that comes after 9 999 is 10 000. If you're counting in 2s up to 9 998, the next number is 10 000. If you're counting in 3s up to 9 997, the next number is 10 000. The number of digits changes from four to five.
 - a. Count forward and backwards in 2s from 9 980 to 10 000.
 - b. Count forward and backwards in 3s from 9 970 to 10 000.
 - c. Count forward and backwards in 5s from 9 950 to 10 000.
 - d. Count forward and backwards in 10s from 9 900 to 10 000.
 - e. Count forward and backwards in 25s from 9 750 to 10 000.
 - f. Count forward and backwards in 50s from 9 500 to 10 000.
 - g. Count forward and backwards in 100s from 9 000 to 10 000.

1. Comparing numbers means answering the question of whether a number is greater (>), smaller (<) or equal to (=) another number. When two numbers are being compared, the expression is read from left to right, just like a word sentence. Example:

51 > 41 is read as “fifty-one is greater than forty-one” **not the other way around**

The symbols > and < can be seen as ‘arrow heads’ that always point to the smaller number.

$$351 < 451$$

$$1\ 836 > 1\ 536$$

$$6\ 587 < 7\ 850$$

$$123 > 93$$

Compare the numbers.

a. 8 730 ____ 8 703

b. 2 658 ____ 2 568

c. 5 623 ____ 5 632

d. 4 203 ____ 4 230

2. In some case’s you may need to calculate the number on the left and the number on the right before you can make a comparison. Example:

$$25 \times 4 = 250 - 50$$

$$25 \times 4 = 200$$

$$250 - 50 = 200$$

$$200 = 200$$

3. Calculate the left and the right then compare the two resulting numbers.

a. 300×10 ____ 30×100

b. $64 \div 8$ ____ 16×2

c. $229 - 30$ ____ $189 - 90$

4. Ordering numbers requires the ability to count in whole numbers. If you can count in whole numbers, then deciding which of two numbers comes first should not be a problem.

Example: Order the numbers 1 500; 1 300; 1400 and 1 600 from **biggest** to **smallest**.

1. 600 would go first as it is the biggest number, followed by 1 500, then 1 400 and finally, 1 300, the smallest of all the numbers. The order can be written as shown:

1 600; 1 500; 1 400; 1 300.

1. Order the following numbers from smallest to biggest.

a. 3 120; 3 220; 3 210; 3 103; 3 320; 3 312

b. 1 123; 1 213; 1 223; 1 113; 1 211; 1 321

2. Order the following numbers from biggest to smallest.

a. 5 435; 4 553 5 345; 4 553; 5 543; 4 535

b. 7 896; 6 978; 7 879; 6 987; 7 897; 6 988

Value - asks **how much** a particular digit adds to the whole number.

Examples:

The value of a phone is how much it costs and the cost is given in numbers i.e. R5 000.

The value of a school bag is how much it costs and the value in a number form i.e. R 400.

1. What is the **value** of the underlined digit?

635 is **5** because $635 = 600 + 30 + 5$ (the true size of the 5 is just 5)

780 is **700** because $780 = 700 + 80 + 0$ (the true size of the 7 is actually 700)

- | | | | |
|------------------------|-------------------|------------------|-------------------|
| a. 8 <u>6</u> 59 → 600 | b. 6 3 <u>2</u> 5 | c. 1 <u>0</u> 22 | d. 4 5 <u>2</u> 2 |
| e. <u>2</u> 578 | f. 3 <u>7</u> 82 | g. 5 99 <u>8</u> | h. <u>3</u> 271 |
| i. 8 <u>4</u> 56 | j. 1 8 <u>9</u> 5 | k. 7 <u>3</u> 58 | l. <u>2</u> 369 |
| m. <u>9</u> 634 | n. 8 <u>7</u> 20 | o. 5 <u>4</u> 78 | p. <u>5</u> 185 |

1. **Place Value** – asks **where** a digit is positioned with respect to the whole number. The names places are: Thousands (TH), Hundreds (H), Tens (T) or Units (U).

Examples:

What is the **place value** of the underlined digit?

952 – the position of the 5 is Tens

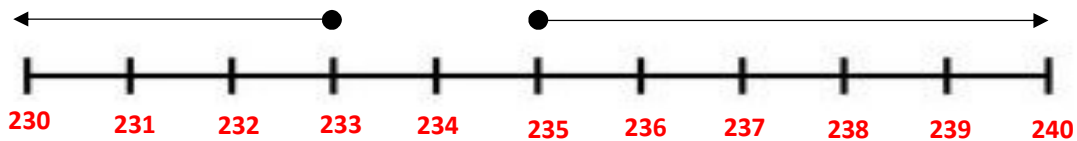
631 – the position of the 3 is Units

2. Write down the **value** and the **place value** of the underlined digits.

Number	Value	Place value
<u>1</u> 320		
4 <u>5</u> 62		
6 9 <u>7</u> 6		
<u>5</u> 541		
8 <u>7</u> 43		
<u>1</u> 803		
7 <u>4</u> 13		
3 <u>3</u> 58		
2 54 <u>9</u>		

Recap: To round off to the nearest **ten**, count in **units** between two consecutive tens. If the number to be rounded off is closer to the previous ten than it is to the next ten, you round it down. However, if it's exactly halfway or closer to the next ten, then you round up to the next ten.

Example: Round off 233 and 235 to the nearest 10.



233 is closer to 230 than 240 so it gets rounded down to **230**.

235 is exactly half-way between 240 and 230 so it gets **rounded up** to **240**.

Four-digit numbers can also be rounded off the nearest 10 in the same way.

Example: Round off 4 762 and 4 766 to the nearest 10.



4 762 is closer to 4 760 than it is to 4 770 so it gets rounded down to **4 760**.

4 766 is closer to 4 770 than it is to 4 760 so it gets rounded up to **4 770**.

Round off the following number to nearest 10. Copy and complete in the classwork book.

1. a. $356 \approx 360$

2. a. $4\,368 \approx 4\,370$

h. $3\,002 \approx$

b. $548 \approx 550$

b. $3\,201 \approx 3\,200$

i. $6\,510 \approx$

c. $968 \approx$

c. $6\,855 \approx$

j. $3\,017 \approx$

d. $573 \approx$

d. $3\,232 \approx$

k. $3\,064 \approx$

e. $367 \approx$

e. $5\,642 \approx$

l. $1\,023 \approx$

f. $401 \approx$

f. $7\,230 \approx$

m. $9\,853 \approx$

g. $240 \approx$

g. $6\,337 \approx$

n. $7\,836 \approx$

Recap: To round off to the nearest **hundred**, count in **tens** between two consecutive hundreds. If the number to be rounded off is closer to the previous hundred than it is to the next hundred, you round it down. However, if it's exactly halfway or closer to the next hundred, then you round up to the next hundred.

Example: Round off 225 and 262 to the nearest 100.



225 is closer to 200 than 300 so it gets rounded down to **200**.

262 is closer to 300 than 200 so it gets rounded up to **300**.

Four-digit numbers can also be rounded off the nearest 100 in the same way.

Example: Round off 4 723 and 4 759 to the nearest 100.



4 723 is closer to 4 700 than 4 800 so it gets rounded down to **4 700**.

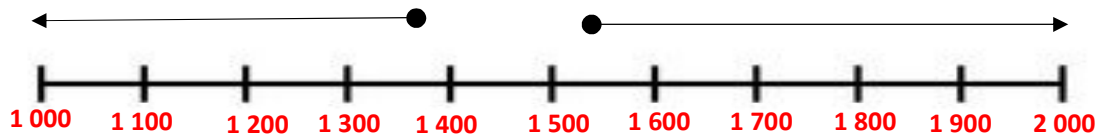
4 759 is closer to 4 800 than 4 700 so it gets rounded up to **4 800**.

Round off the following number to nearest 100. Copy and complete in the classwork book.

- | | | |
|-------------------------|-----------------------------|--------------------|
| 1. a. 356 $\approx$ 400 | 2. a. 4 368 $\approx$ 4 300 | h. 3 002 $\approx$ |
| b. 548 $\approx$ 500 | b. 3 201 $\approx$ 3 200 | i. 6 510 $\approx$ |
| c. 968 $\approx$ | c. 6 855 $\approx$ | j. 3 017 $\approx$ |
| d. 573 $\approx$ | d. 3 232 $\approx$ | k. 3 064 $\approx$ |
| e. 367 $\approx$ | e. 5 642 $\approx$ | l. 1 023 $\approx$ |
| f. 401 $\approx$ | f. 7 230 $\approx$ | m. 9 853 $\approx$ |
| g. 240 $\approx$ | g. 6 337 $\approx$ | n. 7 836 $\approx$ |

To round off to the nearest **thousand**, count in **hundreds** between two consecutive thousands. If the number to be rounded off is closer to the previous thousand than it is to the next thousand, you round it down. However, if it's exactly half-way or closer to the next thousand, then you round up to the next thousand.

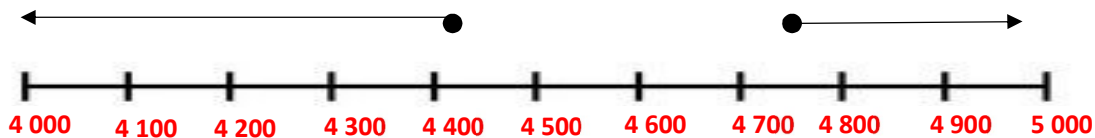
Example 1: Round off 1 540 and 1 380 to the nearest 1 000.



1 380 is closer to 1 000 than 2 000 so it gets rounded down to **1 000**.

1 540 is closer to 2 000 than 1 000 so it gets rounded up to **2 000**.

Example 2: Round off 4 423 and 4 759 to the nearest 1 000.



4 423 is closer to 4 000 than it is to 5 000 so it gets rounded down to **4 000**.

4 754 is closer to 5 000 than it is to 4 000 so it gets rounded up to **5 000**.

Round off the following number to nearest 1 000. Copy and complete in the classwork book.

1. a. $356 \approx 0$

2. a. $4\,368 \approx 4\,000$

h. $3\,002 \approx$

b. $548 \approx 1\,000$

b. $3\,201 \approx 3\,000$

i. $6\,510 \approx$

c. $968 \approx$

c. $6\,855 \approx$

j. $3\,017 \approx$

d. $573 \approx$

d. $3\,232 \approx$

k. $3\,064 \approx$

e. $367 \approx$

e. $5\,642 \approx$

l. $1\,023 \approx$

f. $401 \approx$

f. $7\,230 \approx$

m. $9\,853 \approx$

g. $240 \approx$

g. $6\,337 \approx$

n. $7\,836 \approx$

The addition of whole numbers has mostly been limited to three-digit number calculations. A progression to four-digit number calculations will be made in this lesson. The same calculation techniques used in grade 3 and grade 4, term one, may still be used. Alternatively, learners may use any method they prefer.

Recap:

$$236 + 116 = \square$$

$$200 + 100 = 300$$

$$30 + 10 = 40$$

$$6 + 6 = 12$$

$$300 + 40 + 12 = \mathbf{352}$$

$$653 + 256 = \square$$

$$600 + 200 = 800$$

$$50 + 50 = 100$$

$$3 + 6 = 9$$

$$800 + 100 + 9 = \mathbf{999}$$

Break up the numbers going down the page. Group units, tens and hundreds when adding. Add from right to left. Add these groups to get the final answer.

1. Use ANY method to calculate the answers to the following problems. Show all the working out.

a. $365 + 123 = \square$

d. $705 + 249 = \square$

g. $234 + 455 = \square$

The method above will be used to calculate four-digit number calculations.

$$3\,236 + 1\,116 = \square$$

$$3\,000 + 1\,000 = 4\,000$$

$$200 + 100 = 300$$

$$30 + 10 = 40$$

$$6 + 6 = 12$$

$$4\,000 + 300 + 40 + 12 = \mathbf{4\,352}$$

$$5\,653 + 2\,256 = \square$$

$$5\,000 + 2\,000 = 7\,000$$

$$600 + 200 = 800$$

$$50 + 50 = 100$$

$$3 + 6 = 9$$

$$7\,000 + 800 + 100 + 9 = \mathbf{7\,909}$$

2. Use ANY method to calculate the answers to the following problems. Show all the working out.

a. $1\,023 + 3\,452 = \square$

d. $3\,304 + 2\,103 = \square$

g. $3\,691 + 3\,455 = \square$

b. $3\,012 + 1\,541 = \square$

e. $4\,622 + 2\,314 = \square$

h. $8\,502 + 1\,455 = \square$

c. $2\,365 + 1\,110 = \square$

f. $6\,542 + 2\,654 = \square$

i. $3\,678 + 5\,077 = \square$

The addition of whole numbers has mostly been limited to three-digit number calculations. A progression to four-digit number calculations will be made in this lesson. The same calculation techniques used in grade 3 and grade 4, term one, may still be used. Alternatively, learners may use any method they prefer.

Recap:

$$365 + 121 = \square$$

$$300 + 60 + 5 = 365$$

$$100 + 20 + 1 = 121$$

$$400 + 80 + 6 = 486$$

Break each number above the line. Group units, tens and hundreds when adding. Add from right to left.

1. Use ANY method to calculate the answers to the following problems. Show all the working out.

b. $326 + 458 = \square$

d. $458 + 542 = \square$

g. $106 + 228 = \square$

The method above will be used to calculate four-digit number calculations.

$$1\,236 + 3\,916 = \square$$

$$1000 + 200 + 30 + 6 = 1\,236$$

$$3\,000 + 900 + 10 + 6 = 3\,916$$

$$4\,000 + 1\,100 + 40 + 12 = 5\,152$$

Note!

$$900 + 200 = 1\,100$$

Counting in hundreds...

900; 1000 ; 1 100...

2. Use ANY method to calculate the answers to the following problems. Show all the working out.

a. $1\,078 + 3\,458 = \square$

d. $7\,608 + 4\,903 = \square$

g. $3\,798 + 3\,219 = \square$

b. $5\,456 + 2\,230 = \square$

e. $4\,209 + 4\,485 = \square$

h. $3\,654 + 1\,208 = \square$

c. $1\,181 + 3\,333 = \square$

f. $2\,441 + 3\,132 = \square$

i. $5\,890 + 1\,709 = \square$

The subtraction of whole numbers has mostly been limited to three-digit number calculations. A progression to four-digit number calculations will be made in this lesson. The same calculation techniques used in grade 3 and grade 4, term one, may still be used. Alternatively, learners may use any method they prefer.

Recap:

$$587 - 293 = \square$$

$$^{400}500 + ^180 + ^7 = 587$$

$$200 + 90 + 3 = 293$$

$$200 + 90 + 4 = 294$$

Break each number above the line.
Group units, tens and hundreds.
Subtract from right to left.

80-90 is not the same as 90-80!

You need to borrow a 100 from 500.

3. Use ANY method to calculate the answers to the following problems. Show all the working out.

c. $458 - 365 = \square$

d. $658 - 250 = \square$

g. $217 - 198 = \square$

The method above will be used to calculate four-digit number calculations.

$$5\,152 - 3\,916 = \square$$

$$^{4000}5000 + ^1100 + ^{40}50 + ^2 = 5\,152$$

$$\begin{array}{r} 3\,000 \\ + 900 + 10 + 6 \\ \hline 3\,916 \end{array}$$

$$\begin{array}{r} 1\,000 \\ + 200 + 30 + 6 \\ \hline 1\,236 \end{array}$$

Note!

Borrow 10 for 2-6 then 12-6.

Borrow 1 000 for 100-900 then 1 100-900.

4. Use ANY method to calculate the answers to the following problems. Show all the working out.

a. $2\,586 - 1\,258 = \square$

d. $3\,107 - 2\,664 = \square$

g. $7\,981 - 5\,219 = \square$

b. $3\,577 - 3\,547 = \square$

e. $6\,472 - 4\,485 = \square$

h. $8\,120 - 4\,658 = \square$

c. $1\,245 - 1\,054 = \square$

f. $3\,457 - 1\,288 = \square$

i. $9\,890 - 7\,709 = \square$

Week 1				
Day 1	Day 2	Day 3	Day 4	Day 5
$9 \times 3 =$	$11 \times 8 =$	How many 5s in?	The value of 7 in	Write 24 hr. time
$6 \times 5 =$	$8 \div 8 =$	500	745	3:05 p.m.
$8 \times 7 =$	$8 \times 7 =$	25	73	7:45 a.m.
$6 \times 2 =$	$1 \times 7 =$	200	107	11:15 p.m.
$3 \times 4 =$	$6 \times 7 =$	55	8 507	8:55 a.m.
$3 \times 9 =$	$42 \div 6 =$	35	7 001	1:25 p.m.
$5 \times 6 =$	$11 \times 6 =$	70	67	6:40 p.m.
$7 \times 8 =$	$42 \div 7 =$	1 000	587	12:00 p.m.
$2 \times 6 =$	$24 \div 8 =$	250	The place value of 1	9:45 a.m.
$4 \times 3 =$	$35 \div 7 =$	400	1 450	2:00 a.m.
$30 \times 9 =$	$80 \div 8 =$	550	13	8:35 a.m.
$60 \times 5 =$	$3 \times 8 =$	350	61	Write 12 hr. time
$80 \times 7 =$	$5 \times 6 =$	700	981	18:50
$60 \times 2 =$	$3 \times 7 =$	2 000	6 315	17:10
$30 \times 4 =$	$7 \times 12 =$	Groups of 8 in	9 107	23: 00
$30 \times 9 =$	$56 \div 8 =$	48	125	00:40
$50 \times 6 =$	$9 \times 6 =$	56	Calculate	01:20
$70 \times 8 =$	$56 \div 7 =$	32	$500 + 200$	05:00
$20 \times 6 =$	$21 \div 7 =$	40	$500 + 150$	19:30
$40 \times 3 =$	$2 \times 8 =$	64	$500 + 100$	03:50
$3 \times 90 =$	$6 \times 10 =$	480	$500 + 50$	16:10
$6 \times 50 =$	$6 \times 9 =$	560	$550 - 50$	04:40
$8 \times 70 =$	$5 \times 7 =$	32	$600 - 100$	Halve the number
$6 \times 20 =$	$7 \times 8 =$	400	$650 - 150$	470
$3 \times 40 =$	$7 \times 3 =$	640	$700 - 200$	8 900
$3 \times 90 =$	$9 \times 7 =$	4 800	Calculate	236
$5 \times 60 =$	$28 \div 7 =$	5 600	$2 500 - 240$	78
$7 \times 80 =$	$24 \div 6 =$	3 200	$2 260 - 120$	5 600
$2 \times 60 =$	$12 \times 6 =$	4 000	$2 140 - 60$	4 888
$4 \times 30 =$	$2 \times 6 =$	6 400	$2 080 - 30$	Double the number
$270 \div 9 =$	$8 \times 6 =$	Share among 4	$2 050 - 15$	39
$300 \div 5 =$	$48 \div 6 =$	24	Choose >, <, or =	111
$560 \div 7 =$	$3 \times 6 =$	16	$24 \div 8 * 16$	406
$120 \div 2 =$	$6 \times 8 =$	28	$90 \times 2 * 180$	374
$120 \div 4 =$	$7 \times 4 =$	48	$35 \div 7 * 5$	256
$270 \div 3 =$	$7 \times 6 =$	240	$8 100 \div 9 * 90$	978
$300 \div 5 =$	$49 \div 7 =$	160	$120 \times 8 * 960$	What comes next?
$560 \div 7 =$	$72 \div 6 =$	280	$788 + 13 * 794$	106; 206; 306;
$120 \div 2 =$	$30 \div 6 =$	480	$527 - 9 * 418$	50; 100; 200; 400;
$120 \div 3 =$	$72 \div 6 =$	2 400	$6 000 \div 6 * 60$	28; 21; 14; 7;

