



# Level 2

# CALCULATOR

# SKILLS

## Student Worksheets



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1124581



# CONTENTS

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## TEACHER NOTES

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This is a set of worksheets that covers these objectives:

- Find digits 0–9 and the decimal point and necessary operations buttons (+, −, ÷, =) on a calculator
- Use a calculator to solve simple problems, e.g. add two items
- Use a calculator to correct work which has been completed without the use of a calculator
- Find and use a calculator on a mobile phone to work out how much several items will cost in a shopping trip

There are many practice worksheets. Use those that match the student's needs. These learning outcomes can also be covered in other areas of numeracy.

Just a normal calculator is necessary for these worksheets. It would be easier if all students were using the same type of calculator. A scientific calculator should only be used if students are already familiar with it. Students should also use the calculator on their computer and mobile phone.

Students should have paper in every lesson to do their rough work. Include part of the rough work at the back of their portfolio.



## ASSESSMENT BRIEF

Level:	2
Course:	Calculator Skills
Title:	Using a Calculator

### Guidelines:

You will be expected to:

1. Find digits 0-9 and the decimal point and necessary operations buttons (+, -, ÷, =) on a calculator
2. Use a calculator to solve simple problems, e.g. add two items
3. Use a calculator to correct work which has been completed without the use of a calculator
4. Find and use a calculator on a mobile phone to work out how much several items will cost in a shopping trip

### Assessment criteria:

- Exercises and tasks must be complete and correct.
- Structure answers in a logical and clear manner.
- Use a calculator to do calculations and to check your work.
- Use a calculator to work out everyday costs, e.g. shopping.
- Carry out calculations using all operations. (+, -, ÷, x)
- Ensure the correct spelling of familiar and words.
- Discussions may be recorded.



Submission date: \_\_\_\_\_

Declaration of Authenticity: I confirm that this is my own original work.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_



# THE CALCULATOR



## A. USING CALCULATORS

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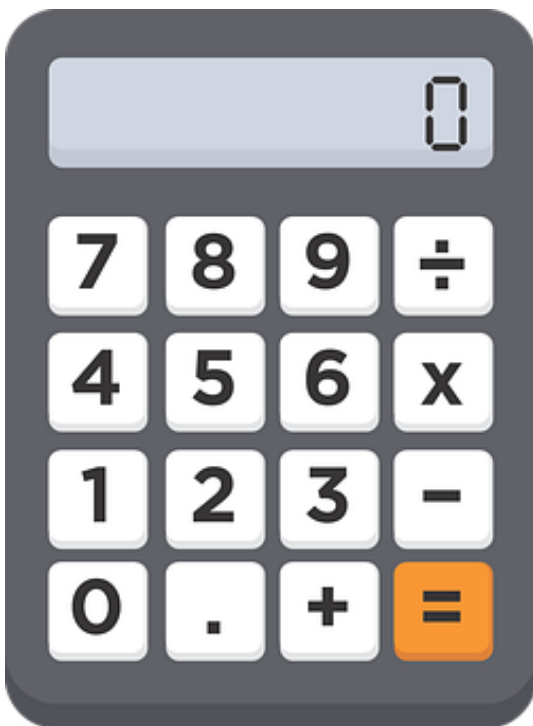
I. Read the information:

Calculators are used everywhere, especially in workplaces and educational centres. They can range from simple hand-held calculators to calculators in computers and workplace machines.

The number of **computer numerically controlled** (CNC) machines in workplaces has increased. Employees need to be confident that they can enter and delete data correctly.

Some examples of when you might use calculators are:

- working with large numbers
- multi-step calculations
- when your answer must be accurate
- checking calculations you have worked out in your head

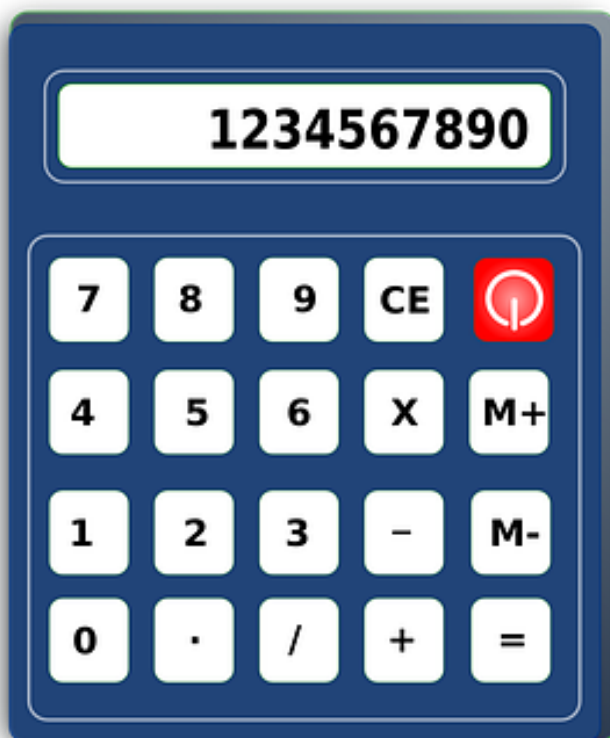


A calculator is a useful tool. You can use it to do difficult calculations quickly and accurately. But a calculator cannot do the thinking for you!

2. When do you use a calculator at home, work or in your learning programme? Write down some examples.

**Examples: household budget, planning an event, planning a holiday, shopping, medical costs, stock-taking at work, checking calculations, saving plan, etc.**

3. Look at the calculator below:



The divide sign on this calculator is a /. Sometimes, the divide sign looks like this: ÷

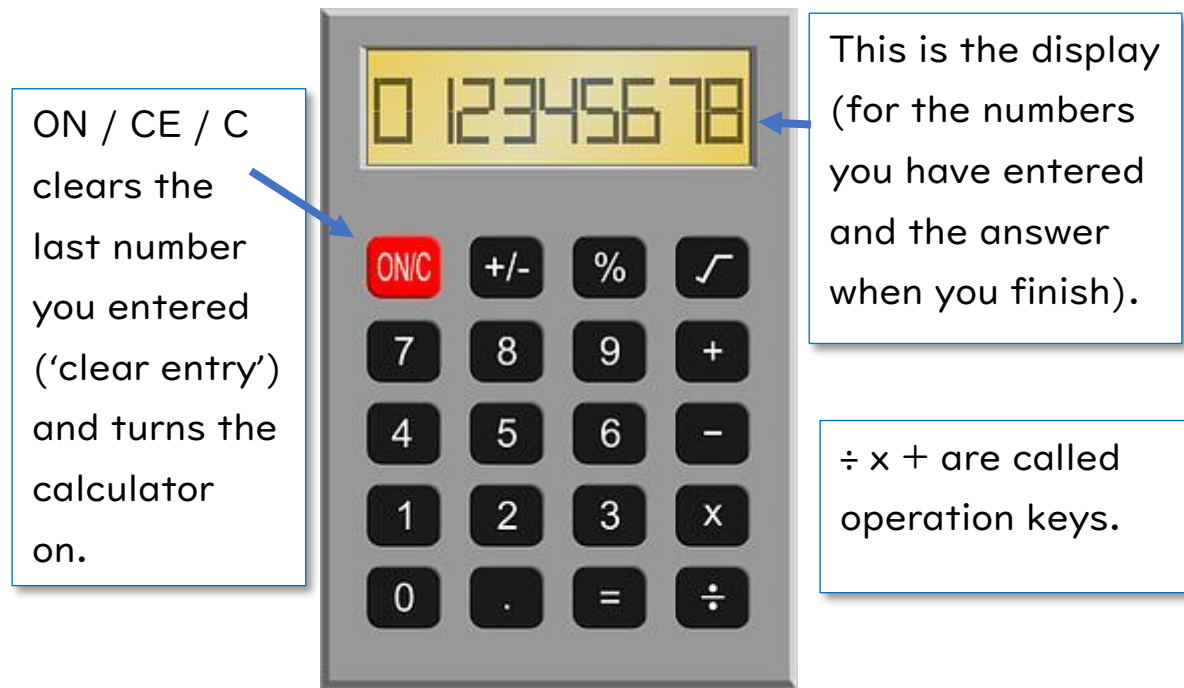
Does your calculator look like this one? Calculators can look slightly different, but most of them have the same basic functions.

Nowadays, you can use the calculator on your computer, tablet or mobile phone.

## B. CALCULATOR KEYS

1. Read the information.

\*Remember: Your calculator keys may be slightly different.



▣ AC clears all numbers entered ('all clear').

▣ ON CE.C and AC are clearing keys.

2. Complete:

a) CE stands for Clear Entry.

b) AC stands for All Clear.

c) Write one operation key: Example: +, -

d) Write what you see in the calculator display above:

012345678

e) In the calculator above, what colour is the ON button?

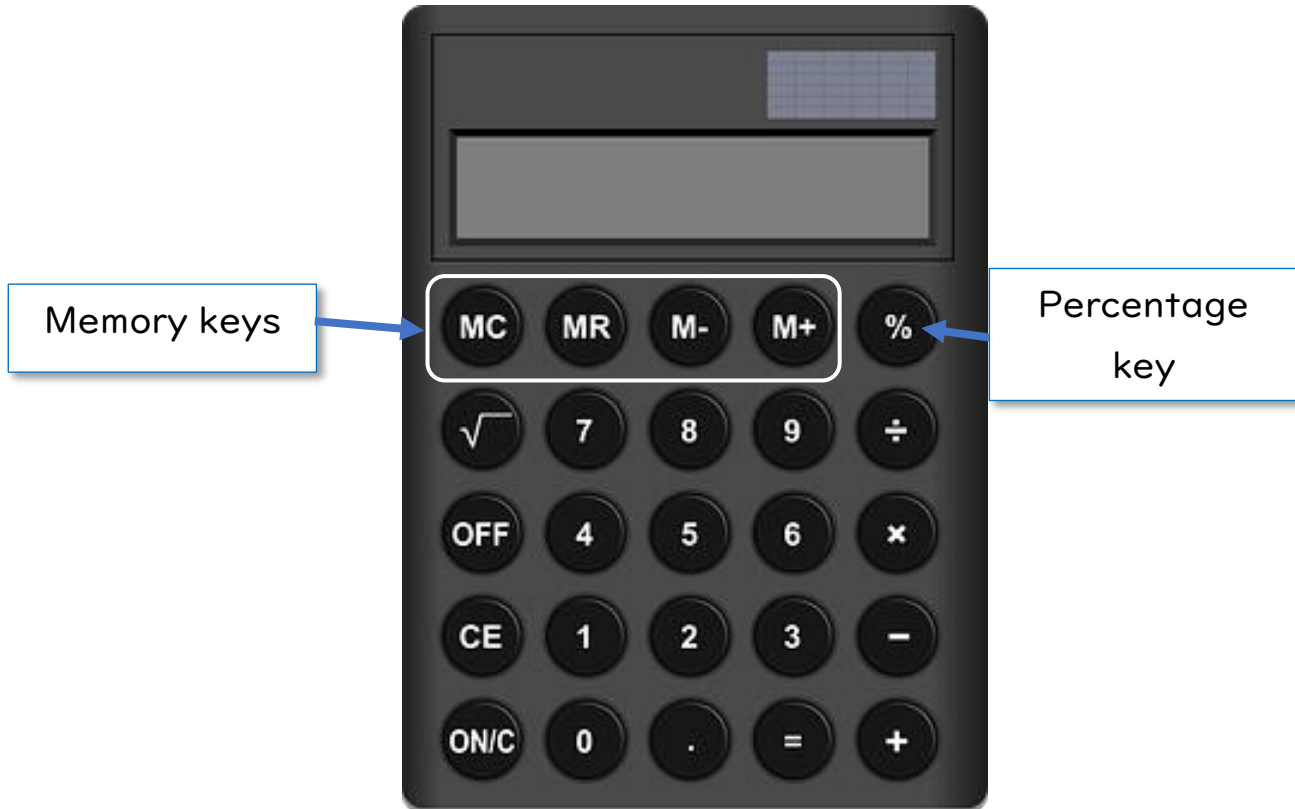
red



### 3. Read:

These keys are called advanced function keys:

- ▣ % is the percentage key.
- ▣ +/- changes between positive and negative numbers. (not on calculator below – check yours!)
- ▣ MR M- M+ MC are memory keys.



\*If you stop using a calculator for a few minutes, it might turn itself off. If this happens press ON / C / CE again.

### 4. Try this:

- a) Take your calculator and press 7 3 2
- b) Press ON / CE / C to clear the display.
- c) It is very important to know how to clear the calculator. Before you start each calculation, press C and make sure 0 is showing.



5. Fill in the calculator keys. Look at this picture of a calculator. Some keys are missing. Write the keys below into the correct blank spaces on the calculator:



6. How could you work out this answer on the calculator?

$$1,000 \times 6,000$$

Solution:

**Step 1** A calculator has buttons for each of the numbers from 0 to 9

**Step 2** The button with the plus (+) sign is used for addition. And the minus sign (-) for subtraction, the times (x) button for multiplication, and divide ( $\div$ ) for division. Sometimes, the multiplication sign might look like this \* and sometimes the division sign looks like this /.

**Step 3** To get the answer, push the = button. Key in the numbers and get the keys relating to operations and finally press the = button to get the answer.

**Step 4** Press the numbers:

$$1, 0 0 0 \times 6, 0 0 0$$

\*Note: the comma here is to separate the thousands. The numbers are one thousand and six thousand.

Use x to perform multiplication.

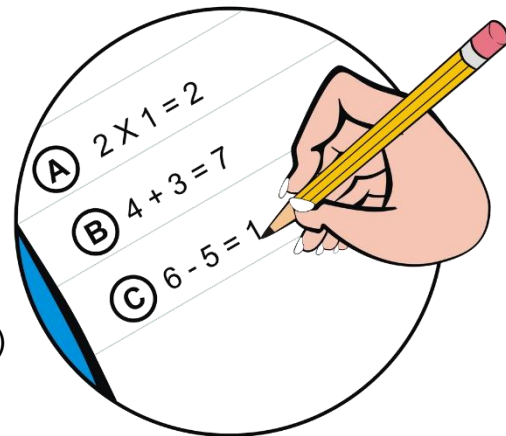
**Step 5**  $1,000 \times 6,000$

Press the  $=$  sign.

The answer is 6,000,000. (six million)

**Step 6**

Check: Is your answer correct? When you multiply any number by 1,000 you just add three zeros.  $6,000 + 3 \text{ zeros} = 6,000,000$



7. Try this out:

$$12 + 35$$

- ❑ ? Pressing 12 + 35 is not enough
- ❑ There is a very important key that you must press at the end
- ❑ You must press = after 12 + 35 to make the calculator work out the answer

$$1 \quad 2 \quad + \quad 3 \quad 5 \quad =$$

Make sure you check the answer. It is easy to hit the wrong key by mistake.

What answer did you get? 47

8. Now, try subtraction

$$45 - 16$$

Remember to press = at the end.

What answer did you get? 29



9. Now, try multiplication

$$27 \times 35$$

What answer did you get? 945

Sometimes, the multiplication sign  $\times$  is a  $*$

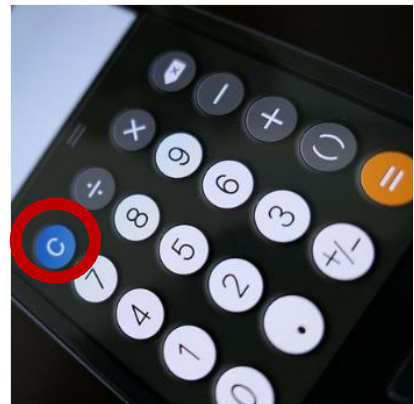
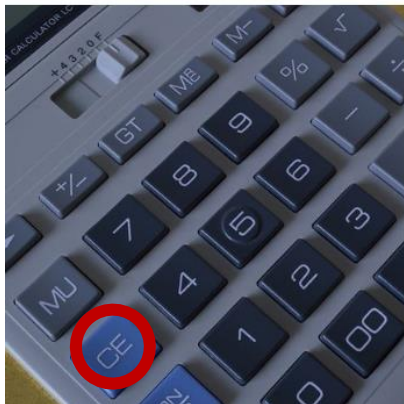
10. Now, try division

$$144 \div 8$$

What answer did you get? 18

Sometimes, the division sign  $\div$  is a  $/$

I 1. Circle where the C or CE keys are on these calculators.



I 2. Where is the C key on your calculator?

**Student's Answer**

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## C. THE CALCULATOR DISPLAY

I. Talk about the different types of displays you have seen, for example:

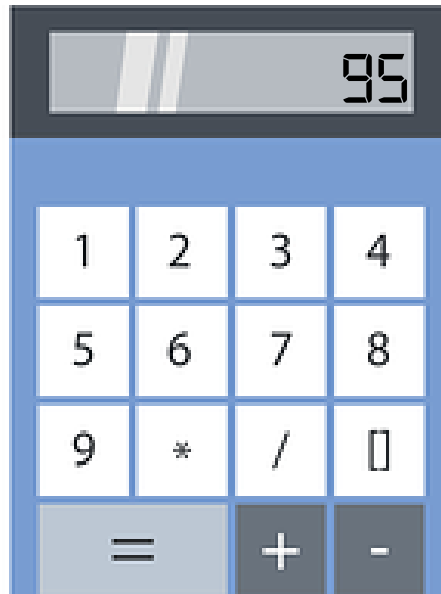


Talk about: When reading displays, you must be careful that you don't make any mistakes. Talk about the possible consequences of incorrectly reading the displays above.

2. Look at these calculator displays. Write the units, tens and hundreds for each.



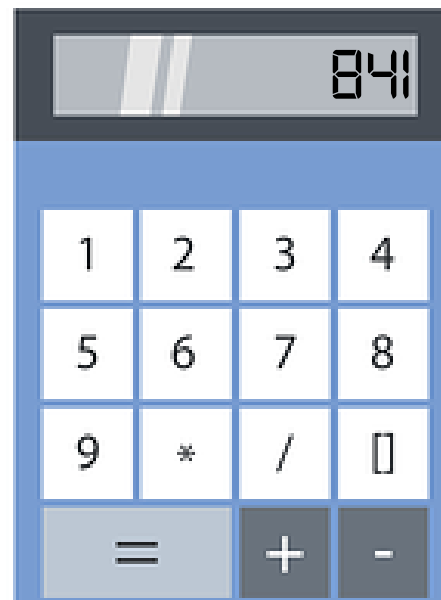
Units = 7  
Tens = 6  
Hundreds = 2



Units = 5  
Tens = 9  
Hundreds = 0



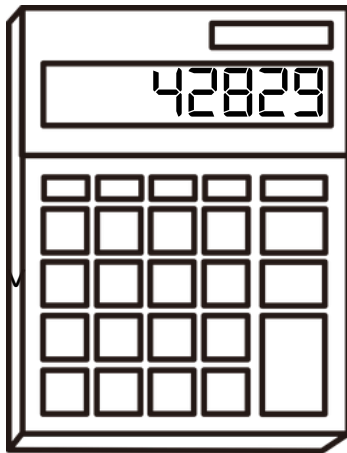
Units = 3  
Tens = 0  
Hundreds = 1



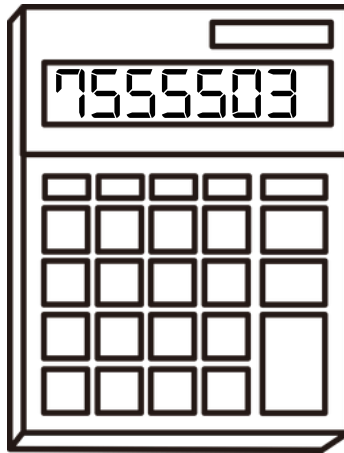
Units = 1  
Tens = 4  
Hundreds = 8

- Working with calculators means you will have to make sure that you have good observation skills.
- It's important that you read the calculator display carefully, in order to avoid mistakes.
- Go over things such as taking care, taking your time and double checking if you are not sure.

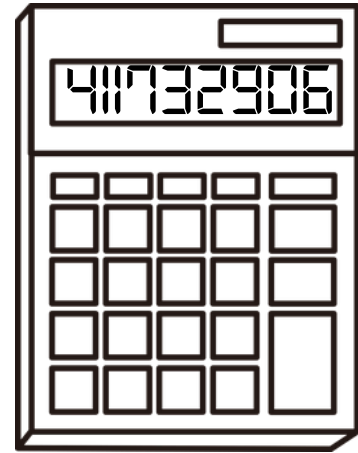
3. Copy the numbers on these displays:



**42829**

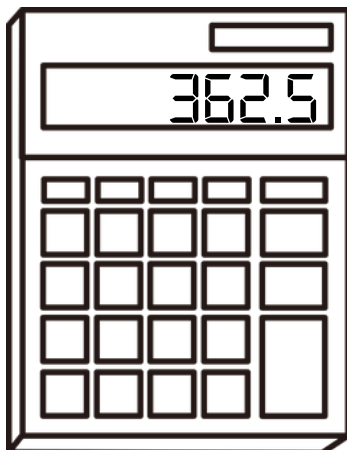


**7555503**



**411732906**

4. Look at the number on the display below. Can you see the decimal point? Copy the number.



**362.5**

A number after the decimal point is not a whole number. For example, the .5 in this number stands for  $\frac{1}{2}$ . So, this number is **three hundred and sixty-two and a half**.

## D. 'WRITING' WITH THE CALCULATOR

This activity involves making 'words' by putting numbers into the calculator and then turning it upside down to 'read' the words. It will give you practice in using the calculator keys.

Example:

- Enter 0.7734 on your calculator.
- Turn your calculator upside down.
- What does the word say? \_\_\_\_\_ **HELLO**



I. Enter the numbers below and turn the calculator upside down.

You will find the missing word in each sentence.

- a) 637 The \_\_\_\_\_ **LEG** \_\_\_\_\_ of the chair is broken.
- b) 607 Please \_\_\_\_\_ **LOG** \_\_\_\_\_ your starting time.
- c) 771 When you are \_\_\_\_\_ **ILL** \_\_\_\_\_, you need to rest.
- d) 710 Add some olive \_\_\_\_\_ **OIL** \_\_\_\_\_ to the pan.
- e) 7718 The waiter brought us the \_\_\_\_\_ **BILL** \_\_\_\_\_.
- f) 4614 When you work in \_\_\_\_\_ **HIGH** \_\_\_\_\_ areas, wear a hardhat.
- g) 5508 Be quiet! The \_\_\_\_\_ **BOSS** \_\_\_\_\_ is coming!



- h) 7108 You need to BOIL the kettle before making tea!
- i) 35007 The bolt on the gate is LOOSE.
- j) 3704 I must dig a HOLE to plant the tree.

2. Backchat! Turn the calculator upside down to read these!

Compare your answers with others in the group.

a)  $609 \times 5 = \text{SHOE}$

b)  $530700 \div 15 = \text{OBESE}$

c)  $6427 \times 5 = \text{SEIZE}$



d)  $770 \times 4 = \text{OBOE}$

e)  $10611625 \div 23 = \text{SLEIGH}$

f)  $37816048 + 125 = \text{ELIGIBLE}$

g)  $5350130 + 5248 = \text{BLESSES}$



h)  $43312 - 5236 = \text{GLOBE}$

i)  $32664 + 2342 = \text{GOOSE}$

j)  $1615 \times 5 = \text{SLOB}$



# VOCABULARY



## A. MATHS WORDS

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1. Read: What words do you know relating to addition, subtraction, multiplication and division?

Examples:

### Addition

sum, altogether, all, in all, together, total, total number, add, increase, increased by, more than, plus

### Subtraction

minus, greater than, take away, fewer than, less than, subtract, decreased by

### Multiplication

product, multiply, multiplied by, times, lots of, groups of, double, twice as many

### Division

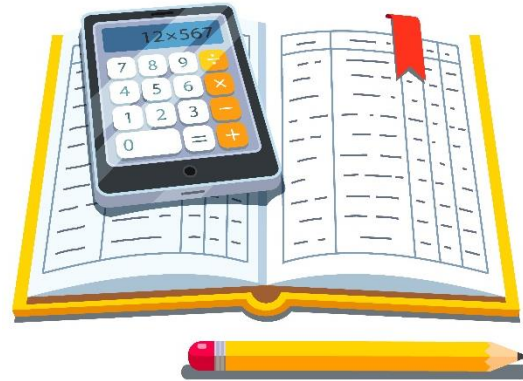
quotient, dividend, divide, divided by, each, per, average, divided equally, share out, halve, split



**Learn these words!**

Other maths words could include:

- money – euro, cents
- patterns
- shapes – square, round, cylinder, triangle, rectangle etc.
- percentages
- ratio
- millions, thousands etc.
- metric words – metres, kilograms
- formula
- diameter, radius, circumference
- algebra, geometry
- time – hours, minutes, seconds, days, months
- speed – kilometres per hour
- size – small, big, larger
- fractions – half, quarter, third
- measures – metre, kilogram, litre
- other: decimal, calculate, figure, sum



2. Write some more maths words:

**Examples: calculation, calculator, numbers, digits, centimetre, millimetre, millilitre, gram, ton, fifth, tenth, weeks, years, graphs, tall, short, narrow, wide, perimeter, area, units, tens, hundreds, etc.**

3. Write down in the boxes below all the words you know in relation to each sign e.g. plus, minus, multiply and divide.

<p>+</p> <p><b>sum, altogether, all, in all, together, total, total number, add, increase, increased by, more than, plus, etc.</b></p>	<p>-</p> <p><b>minus, greater than, take away, fewer than, less than, subtract, decreased by, etc.</b></p>
<p>x</p> <p><b>product, multiply, multiplied by, times, lots of, groups of, double, twice as many, etc.</b></p>	<p>÷</p> <p><b>quotient, dividend, divide, divided by, each, per, average, divided equally, share out, halve, split, etc.</b></p>

4. Choose two more maths words and write a sentence with each.

**Student's Answer**

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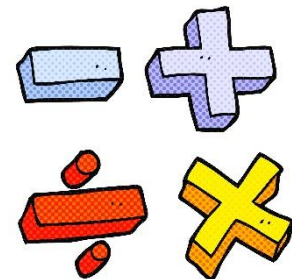
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5. Did you need to do any calculations today? If you did, write down a calculation you used.

### Student's Answers

a) Calculation

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b) Why did you have to do this calculation?

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c) Tick the strategy you used when you added.

- Estimated in my head
- Worked it out in my head
- Used a calculator
- Used pen and paper



6. Complete the puzzle:

6	+	8	=	14
+		+		+
7	+	9	=	16
=		=		=
13	+	17	=	30

20	-	12	=	8
+		+		+
25	-	12	=	13
=		=		=
45	-	24	=	21



# ROUNDING & ESTIMATING



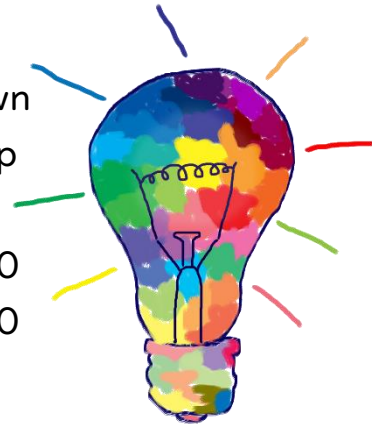
## A. ROUNDING UP AND DOWN

Rounding can help you estimate the answers to calculations.

1. Read: Rounding means making a number simpler but keeping its value close to what it was. The result is less accurate, but easier to use.

The general rule is:

- if numbers end in 1, 2, 3 or 4, you round down
- if numbers end in 5, 6, 7, 8 or 9 you round up
- if a number ends in 0, it stays the same
- example: 28 rounded to the nearest ten is 30
- example: 71 rounded to the nearest ten is 70



2. Round these numbers to the nearest 10. (that means you must look at the units' column)

1,000,000	100,000	10,000s	1,000s	100s	10s	1s

- a) 82 **80**
- b) 66 **70**
- c) 97 **100**
- d) 84 **80**
- e) 92 **90**
- f) 51 **50**
- g) 78 **80**
- h) 50 **50**

- i) 29 **30**
- j) 53 **50**
- k) 95 **100**
- l) 71 **70**
- m) 20 **20**
- n) 47 **50**
- o) 12 **10**
- p) 38 **40**

3. Round each number to the nearest 100. (that means you must look at the tens' column)

1,000,000	100,000	10,000s	1,000s	100s	10s	1s
				2	4	5

Example: 245 rounded to the nearest 100, is 200. (goes down)

Example: 568 rounded to the nearest 100, is 600. (goes up)

a) 388 **400**

k) 289 **300**

b) 869 **900**

l) 386 **400**

c) 532 **500**

m) 111 **100**

d) 364 **400**

n) 521 **500**

e) 886 **900**

o) 856 **900**

f) 638 **600**

p) 284 **300**

g) 871 **900**

q) 561 **600**

h) 298 **300**

r) 526 **500**

i) 218 **200**

s) 464 **500**

j) 175 **200**

t) 605 **600**

Money is a good example of how estimation and rounding can be used. When you are shopping, it is easier to add up mentally when all prices are rounded up to the next euro.

4. Round each amount to the nearest euro and check the total.

8



## SUPERMART

CASH RECEIPT

Date: 01/05/2018

Time: 17:45

Tomato	15,43
Milk	3,07
Cheese	7,55
Meat	25,99
Oil	5,15
Crisp	2,84
Bread	1,27
Beer	4,75

€ 66,05

CASH € 100

CHANGE € 33,95




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5. Is your rounded total close to the total on the receipt? \_\_\_\_\_

If it's way off, then you know something's not right!



6. Round each number to the nearest 1,000. (that means you must look at the hundreds' column)

1,000,000	100,000	10,000s	1,000s	100s	10s	1s
			5	6	8	3

Example: 5,683 rounded to the nearest 1,000 is 6,000 (goes up)

Example: 2,498 rounded to the nearest 1,000 is 2,000 (goes down)

\* Note that the comma in the numbers above is used to separate thousands – it is not a decimal point.

a) 7,288 \_\_\_\_\_

k) 6,369 \_\_\_\_\_

b) 8,325 \_\_\_\_\_

l) 5,972 \_\_\_\_\_

c) 2,678 \_\_\_\_\_

m) 4,883 \_\_\_\_\_

d) 4,122 \_\_\_\_\_

n) 8,588 \_\_\_\_\_

e) 8,182 \_\_\_\_\_

o) 2,767 \_\_\_\_\_

f) 8,827 \_\_\_\_\_

p) 5,835 \_\_\_\_\_

g) 7,581 \_\_\_\_\_

q) 1,935 \_\_\_\_\_

h) 7,792 \_\_\_\_\_

r) 2,485 \_\_\_\_\_

i) 3,659 \_\_\_\_\_

s) 7,147 \_\_\_\_\_

j) 7,869 \_\_\_\_\_

t) 8,126 \_\_\_\_\_



**Example: 73 rounded to the nearest ten is 70, because 73 is closer to 70 than to 80. But 76 goes up to 80.**



## B. ESTIMATING

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1. Read and discuss:

Calculators cannot do the thinking for you. They are simply machines and you need to tell them what to do.

Estimating is a very important skill that you need to develop when using a calculator. This skill will help you decide when you look at the answer on the calculator if the answer is correct. Sometimes when you are using a calculator, you can press the wrong button and get the wrong answer. It is not about guessing but about making a rough calculation.

You can estimate on paper or mentally. Numbers are rounded up or down, so it is easier to work with them quickly.

ESTIMATE



So, it is always good to estimate what the answer will be before you start using the calculator.

2. Name some situations in everyday life where it would be helpful to estimate:

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3. First estimate the answer by using rounded numbers. Then calculate the exact answer with the calculator. Lastly, find the error of estimation with a calculator.

a)  $3,490 + 2,856$  (round to thousands)

Estimation: \_\_\_\_\_

Exact Answer: \_\_\_\_\_

Error of Estimation : \_\_\_\_\_

b)  $209 + 378$  (round to hundreds)

Estimation: \_\_\_\_\_

Exact Answer: \_\_\_\_\_

Error of Estimation: \_\_\_\_\_

c)  $46 + 23$  (round to tens)

Estimation: \_\_\_\_\_

Exact Answer: \_\_\_\_\_

Error of Estimation: \_\_\_\_\_

d)  $5,612 + 2,933$  (round to thousands)

Estimation: \_\_\_\_\_

Exact Answer: \_\_\_\_\_

Error of Estimation: \_\_\_\_\_



**When you enter thousands into the calculator, you do not use the comma.**



**Try some calculations using the calculator on your mobile phone.**

4. Groupwork: Play this game with your calculator.

The Rules of **Make 99**

- ▣ One person in the group sets a number less than 80 on the calculator.
- ▣ They show everyone the number, and someone must add another number on their calculator to get to 99.
- ▣ Whoever gets the right answer first gets one point.
- ▣ Each person in the group gets a chance to give the first number.

You could also try: **Make 100** or **Make 999**

5. Write some of the numbers that made 99.

a) \_\_\_\_\_ + \_\_\_\_\_ = 99

b) \_\_\_\_\_ + \_\_\_\_\_ = 99

c) \_\_\_\_\_ + \_\_\_\_\_ = 99

d) \_\_\_\_\_ + \_\_\_\_\_ = 99

e) \_\_\_\_\_ + \_\_\_\_\_ = 99

f) \_\_\_\_\_ + \_\_\_\_\_ = 99

g) \_\_\_\_\_ + \_\_\_\_\_ = 99

h) \_\_\_\_\_ + \_\_\_\_\_ = 99

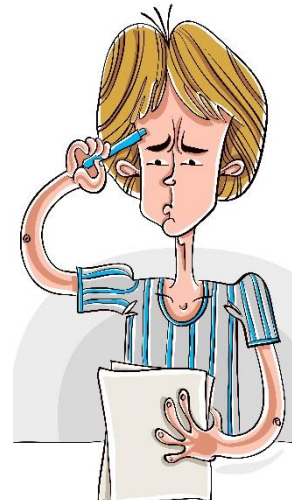
i) \_\_\_\_\_ + \_\_\_\_\_ = 99

j) \_\_\_\_\_ + \_\_\_\_\_ = 99



**Example:**

$$23 + 76 = 99$$



# OPERATIONS ON THE CALCULATOR



## A. ADDITION ON YOUR CALCULATOR

1. Look at your calculator. Find the + key and the = key.

a) Enter these numbers into your calculator:  $240 + 60 =$

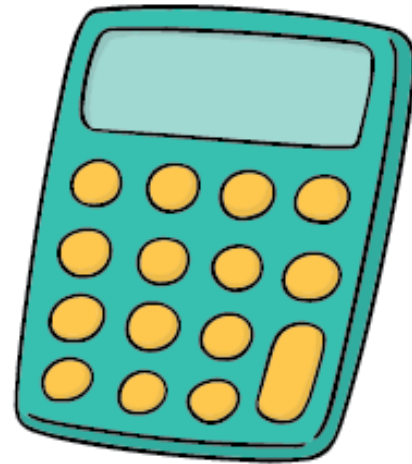
b) Press 2 4 0

c) Press +

d) Press 6 0

e) Press =

f) Write the answer in the display below.



2. Try these

a)  $27 + 67 =$  \_\_\_\_\_

b)  $45 + 28 =$  \_\_\_\_\_

c)  $36 + 39 =$  \_\_\_\_\_

d)  $58 + 89 =$  \_\_\_\_\_

e)  $67 + 89 =$  \_\_\_\_\_

f)  $102 + 76 =$  \_\_\_\_\_

g)  $165 + 10 =$  \_\_\_\_\_

h)  $270 + 31 =$  \_\_\_\_\_

i)  $88 + 12 =$  \_\_\_\_\_

j)  $250 + 55 =$  \_\_\_\_\_

3. And try these:

a)  $123 + 34 + 453 =$  \_\_\_\_\_

b)  $78 + 34 + 56 =$  \_\_\_\_\_

c)  $434 + 893 + 545 =$  \_\_\_\_\_



It does not matter  
which order you use  
to add numbers.

$$7 + 8 = 8 + 7$$





4. Match the sums and answers. You can estimate and then use your calculator.

<b>54 + 18</b>	●		●	<b>60</b>
<b>72 + 20</b>	●		●	<b>83</b>
<b>11 + 55</b>	●		●	<b>72</b>
<b>29 + 39</b>	●		●	<b>86</b>
<b>45 + 28</b>	●		●	<b>75</b>
<b>10 + 80</b>	●		●	<b>66</b>
<b>32 + 28</b>	●		●	<b>68</b>
<b>30 + 44</b>	●		●	<b>92</b>
<b>67 + 16</b>	●		●	<b>73</b>
<b>9 + 76</b>	●		●	<b>90</b>
<b>38 + 37</b>	●		●	<b>74</b>
<b>69 + 17</b>	●		●	<b>85</b>

5. Complete the addition puzzle:

6	+		+	3	=	
+		+		+		+
3	+		+		+	10
+		+		+		+
	+	5	+	8	=	
=		=		=		=
	+	13	+	15	=	50





6. Do these vertical addition sums then check the answers on your calculator.

$$\begin{array}{r} 12 \\ 27 + \end{array}$$

$$\begin{array}{r} 34 \\ 21 + \end{array}$$

$$\begin{array}{r} 55 \\ 10 + \end{array}$$

$$\begin{array}{r} 33 \\ 22 + \end{array}$$

$$\begin{array}{r} 20 \\ 80 + \end{array}$$

$$\begin{array}{r} 18 \\ 63 + \end{array}$$

$$\begin{array}{r} 48 \\ 24 + \end{array}$$

$$\begin{array}{r} 63 \\ 29 + \end{array}$$

$$\begin{array}{r} 92 \\ 9 + \end{array}$$

7. How many did you get correct out of 9? Tick them. \_\_\_\_\_

8. Correct any mistakes you made.

9. Four boxes contain several 1s, 3s, 5s and 7s.

Choose any ten numbers from the boxes so that their total is 37.

<b>1, 1, 1, 1, 1,</b>	<b>3, 3, 3, 3, 3,</b>	<b>5, 5, 5, 5, 5,</b>	<b>7, 7, 7, 7, 7,</b>
<b>1, 1, 1</b>	<b>3, 3, 3, 3</b>	<b>5, 5, 5</b>	<b>7, 7, 7</b>

Write the numbers below. Use your calculator to help you.

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10. Use your calculator to find out which of these sums has been added correctly. Tick ✓ the correct ones and put a ✗ by the incorrect ones. Write the correct answers.

a)  $99 + 85 = 184$

n)  $60 + 59 = 118$

b)  $94 + 93 = 185$

o)  $62 + 80 = 142$

c)  $66 + 81 = 147$

p)  $71 + 56 = 227$

d)  $89 + 57 = 136$

q)  $85 + 74 = 159$

e)  $52 + 82 = 134$

r)  $69 + 97 = 169$

f)  $91 + 52 = 143$

s)  $81 + 69 = 151$

g)  $79 + 78 = 158$

t)  $77 + 70 = 147$

h)  $70 + 79 = 149$

u)  $92 + 97 = 189$

i)  $78 + 88 = 166$

v)  $91 + 83 = 174$

j)  $53 + 90 = 143$

w)  $90 + 67 = 357$

k)  $93 + 89 = 182$

x)  $66 + 66 = 102$

l)  $61 + 63 = 126$

y)  $67 + 55 = 122$

m)  $70 + 55 = 125$

z)  $68 + 97 = 165$



**Make sure you know your  
addition facts! See  
Appendix 3.**





11. Find the answers, using your calculator.

**Try some calculations using the calculator on your mobile phone.**



a)  $325 + 222 =$  \_\_\_\_\_

n)  $424 + 172 =$  \_\_\_\_\_

b)  $272 + 273 =$  \_\_\_\_\_

o)  $409 + 222 =$  \_\_\_\_\_

c)  $133 + 408 =$  \_\_\_\_\_

p)  $409 + 462 =$  \_\_\_\_\_

d)  $156 + 208 =$  \_\_\_\_\_

q)  $131 + 351 =$  \_\_\_\_\_

e)  $451 + 368 =$  \_\_\_\_\_

r)  $211 + 243 =$  \_\_\_\_\_

f)  $128 + 460 =$  \_\_\_\_\_

s)  $366 + 376 =$  \_\_\_\_\_

g)  $307 + 301 =$  \_\_\_\_\_

t)  $210 + 469 =$  \_\_\_\_\_

h)  $489 + 445 =$  \_\_\_\_\_

u)  $272 + 499 =$  \_\_\_\_\_

i)  $170 + 475 =$  \_\_\_\_\_

v)  $227 + 431 =$  \_\_\_\_\_

j)  $308 + 372 =$  \_\_\_\_\_

w)  $284 + 359 =$  \_\_\_\_\_

k)  $436 + 373 =$  \_\_\_\_\_

x)  $144 + 189 =$  \_\_\_\_\_

l)  $474 + 445 =$  \_\_\_\_\_

y)  $231 + 500 =$  \_\_\_\_\_

m)  $446 + 100 =$  \_\_\_\_\_

z)  $460 + 138 =$  \_\_\_\_\_

12. Estimate the correct answer, circle it, and then use your calculator to check the answer:

- a)  $29 + 61 + 11 =$   
 b)  $22 + 19 + 51 =$   
 c)  $31 + 28 + 32 =$   
 d)  $19 + 22 + 23 + 18 =$   
 e)  $63 + 39 + 59 =$   
 f)  $19 + 22 + 31 + 48 =$   
 g)  $21 + 18 + 22 + 17 + 23 =$

Answers:

- 41, 61, 81, 101  
 62, 92, 112, 132  
 61, 71, 81, 91  
 82, 92, 102, 112  
 131, 141, 161, 171  
 110, 120, 130, 140  
 91, 101, 121, 131

Tick ✓ the ones you got correct.

13. Choose the correct answer for each puzzle:

$$\text{pear} + \text{pear} - \text{pear} = 5$$

$$\text{orange} + \text{orange} - \text{pear} = 7$$

$$\text{strawberry} + \text{pear} + \text{orange} = 18$$

$$\text{strawberry} = ?$$

- 9 7 8 6

$$\text{tree} + \text{tree} - \text{tree} = 6$$

$$\text{tree} + \text{tree} - \text{tree} = 6$$

$$\text{tree} + \text{tree} - \text{tree} = 5$$

$$\text{tree} = ?$$

- 5 3 6 4

14. Challenge!

Addition with bigger numbers - try these!

Work out the sum for each question. Remember to estimate first!

a)  $262 + 175 + 832 =$

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b)  $621 + 675 + 823 =$

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c)  $127 + 145 + 149 =$

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d)  $123 + 254 + 396 =$

---

---

e)  $272 + 945 + 1,627 =$

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f)  $621 + 1,763 + 228 =$

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---

g)  $913 + 234 + 437 + 1,492 + 920 + 1,191 + 1,273 =$

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h)  $6,000 + 2,473 + 1,299 + 1,470 + 1,006 + 3,467 + 891 =$

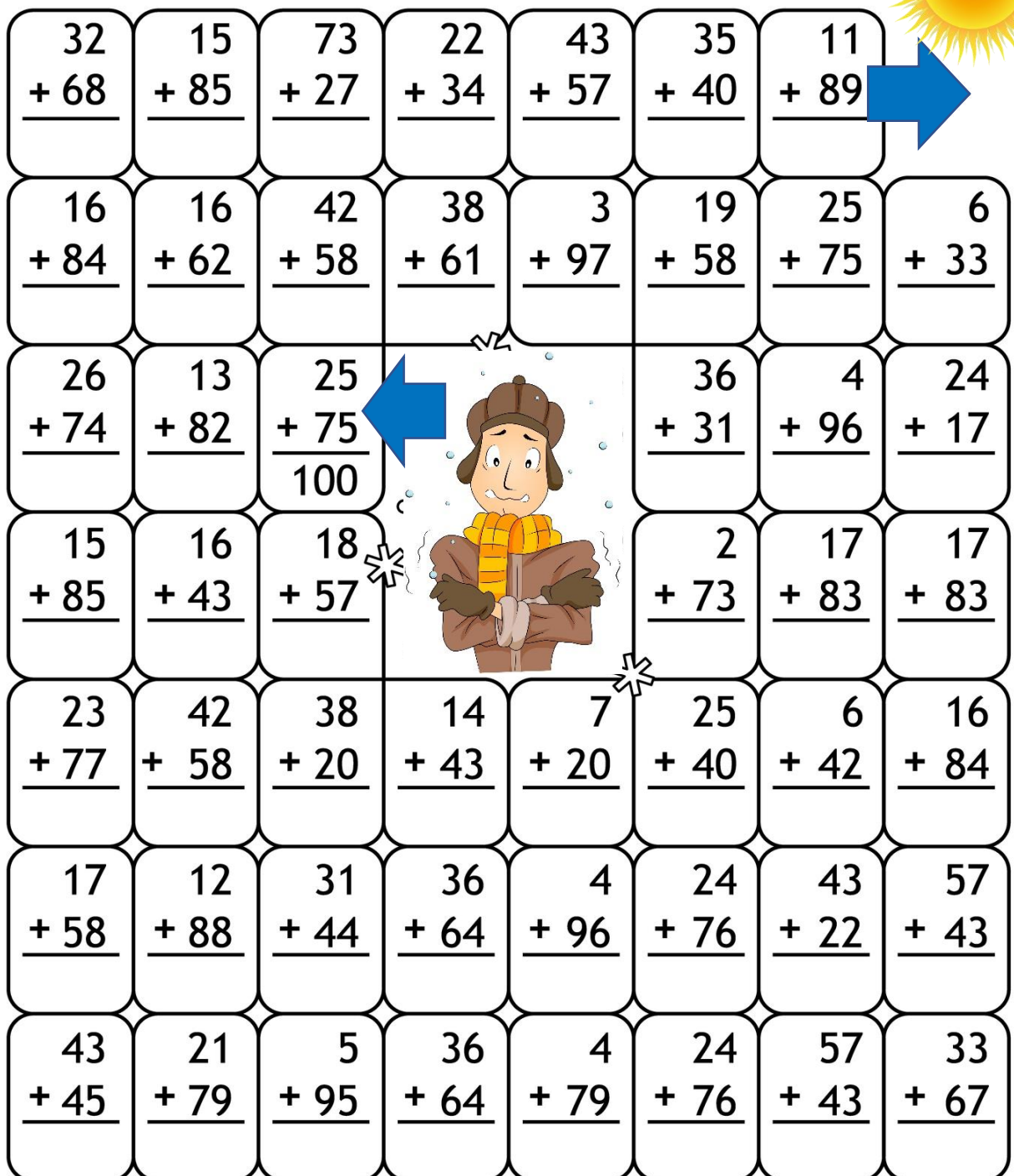
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**Try some calculations using the calculator on your mobile phone.**



15. Practice: Estimate and check your answers with the calculator.  
Make a path by drawing a line through the boxes that have a sum of 100.



$\begin{array}{r} 32 \\ + 68 \\ \hline \end{array}$	$\begin{array}{r} 15 \\ + 85 \\ \hline \end{array}$	$\begin{array}{r} 73 \\ + 27 \\ \hline \end{array}$	$\begin{array}{r} 22 \\ + 34 \\ \hline \end{array}$	$\begin{array}{r} 43 \\ + 57 \\ \hline \end{array}$	$\begin{array}{r} 35 \\ + 40 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ + 89 \\ \hline \end{array}$
$\begin{array}{r} 16 \\ + 84 \\ \hline \end{array}$	$\begin{array}{r} 16 \\ + 62 \\ \hline \end{array}$	$\begin{array}{r} 42 \\ + 58 \\ \hline \end{array}$	$\begin{array}{r} 38 \\ + 61 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ + 97 \\ \hline \end{array}$	$\begin{array}{r} 19 \\ + 58 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ + 75 \\ \hline \end{array}$
$\begin{array}{r} 26 \\ + 74 \\ \hline \end{array}$	$\begin{array}{r} 13 \\ + 82 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ + 75 \\ \hline 100 \end{array}$		$\begin{array}{r} 36 \\ + 31 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 96 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ + 17 \\ \hline \end{array}$
$\begin{array}{r} 15 \\ + 85 \\ \hline \end{array}$	$\begin{array}{r} 16 \\ + 43 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ + 57 \\ \hline \end{array}$		$\begin{array}{r} 2 \\ + 73 \\ \hline \end{array}$	$\begin{array}{r} 17 \\ + 83 \\ \hline \end{array}$	$\begin{array}{r} 17 \\ + 83 \\ \hline \end{array}$
$\begin{array}{r} 23 \\ + 77 \\ \hline \end{array}$	$\begin{array}{r} 42 \\ + 58 \\ \hline \end{array}$	$\begin{array}{r} 38 \\ + 20 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ + 43 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ + 20 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ + 40 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ + 42 \\ \hline \end{array}$
$\begin{array}{r} 17 \\ + 58 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ + 88 \\ \hline \end{array}$	$\begin{array}{r} 31 \\ + 44 \\ \hline \end{array}$	$\begin{array}{r} 36 \\ + 64 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 96 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ + 76 \\ \hline \end{array}$	$\begin{array}{r} 43 \\ + 22 \\ \hline \end{array}$
$\begin{array}{r} 43 \\ + 45 \\ \hline \end{array}$	$\begin{array}{r} 21 \\ + 79 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ + 95 \\ \hline \end{array}$	$\begin{array}{r} 36 \\ + 64 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ + 79 \\ \hline \end{array}$	$\begin{array}{r} 24 \\ + 76 \\ \hline \end{array}$	$\begin{array}{r} 57 \\ + 43 \\ \hline \end{array}$





16. Now, you are going to try some addition word sums on the calculator.

Some tips:

- A. Always read the problem very carefully.
- B. Understand the question. What is the question asking you to do?
- C. Choose the right method for the problem.
- D. Use the right skills to solve the problem.
- E. Write down the answer in the right way e.g. showing your working out.
- F. Word problems often have real answers that are units of measurement e.g. kg. Make sure that you add the unit of measure. Often - 'A word problem has a word answer'.

17. Use your calculator to solve these problems. Write the number sentences and answers!



a) Lisa is on the packing line in a factory. Her supervisor has set her a target of packing 2,200 trays of cupcakes per week. She packs:  
540 Monday + 480 Tuesday + 485 Wednesday + 470 Thursday + 520 Friday

Add up what Lisa has packed. Did she make her target? \_\_\_\_\_

Is this more or less than her weekly target? \_\_\_\_\_

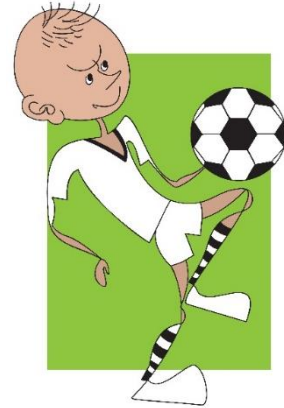
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b) Patricia went to 16 football games this month. She went to 12 games last month and plans to go to 19 games next month. How many games will she attend in all?



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c) Three friends went out for lunch. Mel paid €27, Louise paid €25 and Geraldine paid €16. How much did they spend on lunch altogether?

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d) Darren worked for 30 hours this week, Tommy worked 21 hours, and Roy worked 38 hours. How many hours did they work altogether?

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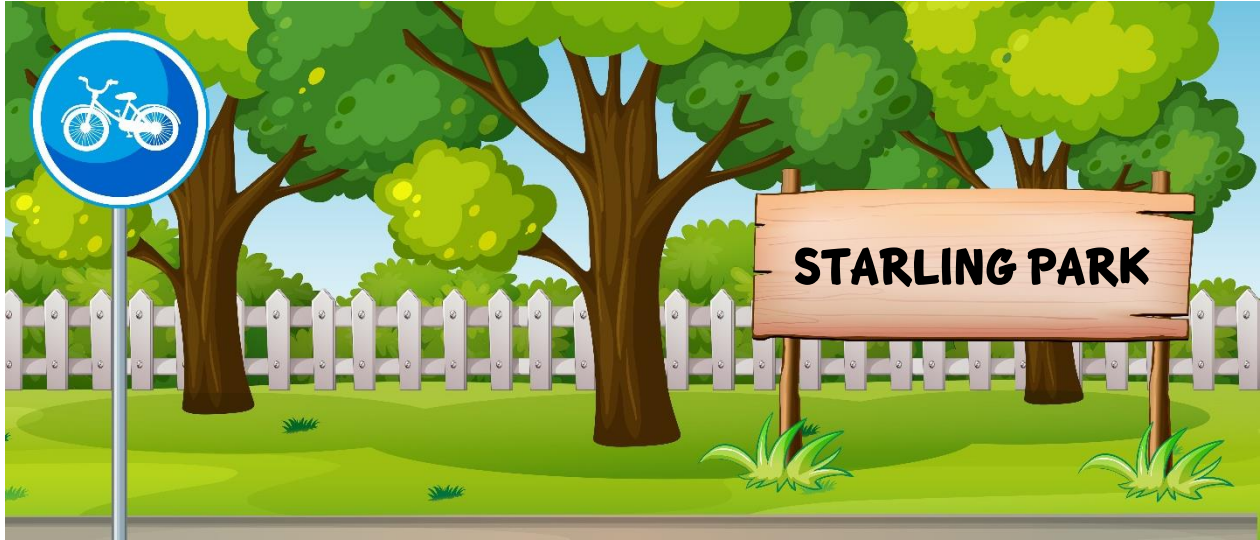
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e) In the park, there are 17 walnut trees, 29 oak trees and 42 ash trees. How many trees are in the park?

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f) In the sale, Rob bought trousers for €18, a shirt for €13, socks for €4.50 and a belt for €8.50. How much did Rob spend in the sale?

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g) For the coffee morning, Linda put out 12 blueberry muffins, 15 chocolate muffins and 21 whole-wheat muffins. How many muffins were put out?

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## B. SUBTRACTION ON THE CALCULATOR

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1. Look at your calculator. Find the  $-$  key and the  $=$  key.

a) Estimate then calculate the following:

b)  $130 - 85 =$

c) Write the answer in the display below.



2. Try these. Remember to estimate first, then use your calculator.

a)  $78 - 29 =$

m)  $98 - 52 =$

b)  $70 - 37 =$

n)  $76 - 68 =$

c)  $98 - 57 =$

o)  $86 - 64 =$

d)  $84 - 45 =$

p)  $89 - 21 =$

e)  $97 - 37 =$

q)  $93 - 52 =$

f)  $75 - 60 =$

r)  $96 - 41 =$

g)  $81 - 27 =$

s)  $83 - 10 =$

h)  $72 - 59 =$

t)  $98 - 33 =$

i)  $89 - 31 =$

u)  $98 - 64 =$

j)  $92 - 27 =$

v)  $92 - 51 =$

k)  $82 - 12 =$

w)  $74 - 16 =$

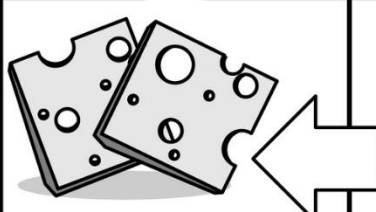
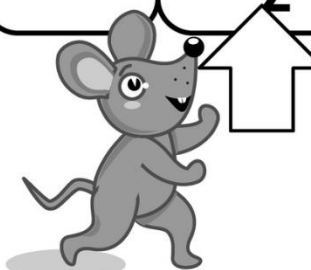
l)  $88 - 32 =$

x)  $91 - 52 =$

**Try some calculations using the calculator on your mobile phone.**



3. Practise your mental subtraction. Take the mouse to the cheese.  
Make a path by drawing a line through the boxes that have a difference of 2, 4 or 8.

$\begin{array}{r} 16 \\ - 8 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ - 8 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ - 10 \\ \hline \end{array}$	$\begin{array}{r} 16 \\ - 12 \\ \hline \end{array}$	$\begin{array}{r} 19 \\ - 18 \\ \hline \end{array}$	$\begin{array}{r} 17 \\ - 3 \\ \hline \end{array}$
$\begin{array}{r} 19 \\ - 15 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ - 1 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ - 6 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ - 1 \\ \hline \end{array}$	$\begin{array}{r} 16 \\ - 14 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ - 7 \\ \hline \end{array}$
$\begin{array}{r} 14 \\ - 6 \\ \hline \end{array}$	$\begin{array}{r} 15 \\ - 7 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ - 13 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ - 4 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ - 3 \\ \hline \end{array}$	$\begin{array}{r} 4 \\ - 2 \\ \hline \end{array}$
$\begin{array}{r} 15 \\ - 1 \\ \hline \end{array}$	$\begin{array}{r} 19 \\ - 11 \\ \hline \end{array}$	$\begin{array}{r} 13 \\ - 7 \\ \hline \end{array}$		$\begin{array}{r} 12 \\ - 4 \\ \hline 8 \end{array}$	
$\begin{array}{r} 18 \\ - 11 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ - 3 \\ \hline 2 \end{array}$	$\begin{array}{r} 15 \\ - 9 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ - 8 \\ \hline \end{array}$	$\begin{array}{r} 15 \\ - 5 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ - 7 \\ \hline \end{array}$
	$\begin{array}{r} 11 \\ - 8 \\ \hline \end{array}$	$\begin{array}{r} 14 \\ - 11 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ - 4 \\ \hline \end{array}$	$\begin{array}{r} 17 \\ - 6 \\ \hline \end{array}$	



4. Try these. Remember to estimate first, then use your calculator.

a)  $569 - 260 =$  \_\_\_\_\_

n)  $773 - 261 =$  \_\_\_\_\_

b)  $763 - 295 =$  \_\_\_\_\_

o)  $431 - 100 =$  \_\_\_\_\_

c)  $585 - 153 =$  \_\_\_\_\_

p)  $523 - 290 =$  \_\_\_\_\_

d)  $410 - 239 =$  \_\_\_\_\_

q)  $759 - 294 =$  \_\_\_\_\_

e)  $719 - 370 =$  \_\_\_\_\_

r)  $807 - 229 =$  \_\_\_\_\_

f)  $523 - 296 =$  \_\_\_\_\_

s)  $640 - 220 =$  \_\_\_\_\_

g)  $862 - 386 =$  \_\_\_\_\_

t)  $626 - 294 =$  \_\_\_\_\_

h)  $999 - 343 =$  \_\_\_\_\_

u)  $622 - 317 =$  \_\_\_\_\_

i)  $889 - 170 =$  \_\_\_\_\_

v)  $703 - 357 =$  \_\_\_\_\_

j)  $864 - 374 =$  \_\_\_\_\_

w)  $554 - 128 =$  \_\_\_\_\_

k)  $871 - 176 =$  \_\_\_\_\_

x)  $448 - 358 =$  \_\_\_\_\_

l)  $539 - 374 =$  \_\_\_\_\_

y)  $583 - 395 =$  \_\_\_\_\_

m)  $956 - 255 =$  \_\_\_\_\_

z)  $776 - 386 =$  \_\_\_\_\_



5. Match the sums and answers. You can estimate and then use your calculator.

<b>90 - 20</b>	●		●	<b>1</b>
<b>48 - 19</b>	●		●	<b>9</b>
<b>37 - 36</b>	●		●	<b>72</b>
<b>55 - 18</b>	●		●	<b>36</b>
<b>76 - 67</b>	●		●	<b>22</b>
<b>80 - 42</b>	●		●	<b>49</b>
<b>95 - 23</b>	●		●	<b>66</b>
<b>81 - 45</b>	●		●	<b>29</b>
<b>56 - 7</b>	●		●	<b>70</b>
<b>93 - 27</b>	●		●	<b>34</b>
<b>51 - 29</b>	●		●	<b>37</b>
<b>64 - 30</b>	●		●	<b>38</b>

6. Work out the value of each shape:

$$\bigcirc + \triangle = 8$$

$$\bigcirc - \triangle = 4$$

$$\star + \square = 12$$

$$\star - \square = \square$$

$$\square + \square = \star$$

$$\star =$$

$$\bigcirc =$$

$$\square =$$

$$\triangle =$$





7. You are going to do some subtraction word problems.

A general rule in subtraction is that we take the smaller number from the bigger number.

Remember the steps to follow when working out a word problem:

- A. Always read the problem very carefully.
- B. Understand the question. What is the question asking you to do?
- C. Choose the right method for the problem.
- D. Use the right skills to solve the problem.
- E. Write down the answer in the right way e.g. showing your working out.
- F. Word problems often have real answers that are units of measurement e.g. kg. Make sure that you add the unit of measure. Often - 'A word problem has a word answer'.

8. Remember: Estimate at the start of each calculation. Then use a calculator to refine your answer. Remember to include the units in your answer e.g. ten boxes, three hours. Write the number sentences and answers!

a) Alan has €450.00. He spends €375 on furniture. How much money does he have left?

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b) There were 720 books in the office. 630 were non-fiction and the rest were fiction. How many fiction books were there?

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c) Fifi worked 44 hours last week. She usually works a 22-hour week. How many hours' overtime did she work?

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d) Kevin has €10.00 in his pocket. He spends €4.95 on coffee and a sandwich at lunchtime. How much does he have left?



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e) There were 36 people on the bus. 5 got off at the first stop, 11 got off at the second stop and 9 got off at the third stop. If no-one else got on the bus, how many people were left on the bus?

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f) Can you solve this problem using your calculator?

Martin gets paid €400.00 each week. He must pay some bills this week. Find out how much he has left over.

On your calculator:

- Enter €400.00
- Subtract €53.10 for petrol
- Subtract €45.00 for gas
- Subtract €100.00 for rent
- Subtract €22.50 for car payments
- Subtract €65.50 for food



Will Martin have any money left over?

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If so, how much?

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Would Martin be able to his telephone bill of €82.00? Explain.

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## C. MULTIPLICATION ON THE CALCULATOR

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1. Read:

Multiplication is a fast form of addition.

When would you use addition? When would you use multiplication?

Multiplication is used when you work with the same number, e.g.  $7 + 7 + 7 + 7$  is the same as  $7 \times 5$ .

We must use addition if the numbers are different.

Look at your calculator. Find the X key and the = key.

a) Estimate then calculate the following:

b)  $15 \times 3 =$

c) Write the answer in the display below.



2. Try these. Compare your answers with other class members.

a)  $14 \times 4 =$  \_\_\_\_\_

b)  $17 \times 5 =$  \_\_\_\_\_

c)  $11 \times 5 =$  \_\_\_\_\_

d)  $19 \times 1 =$  \_\_\_\_\_

e)  $14 \times 4 =$  \_\_\_\_\_

f)  $12 \times 7 =$  \_\_\_\_\_

g)  $16 \times 4 =$  \_\_\_\_\_

h)  $1 \times 8 =$  \_\_\_\_\_

i)  $12 \times 9 =$  \_\_\_\_\_

j)  $13 \times 6 =$  \_\_\_\_\_

k)  $15 \times 4 =$  \_\_\_\_\_

l)  $12 \times 9 =$  \_\_\_\_\_

m)  $17 \times 7 =$  \_\_\_\_\_

n)  $14 \times 3 =$  \_\_\_\_\_

o)  $13 \times 9 =$  \_\_\_\_\_

p)  $10 \times 9 =$  \_\_\_\_\_



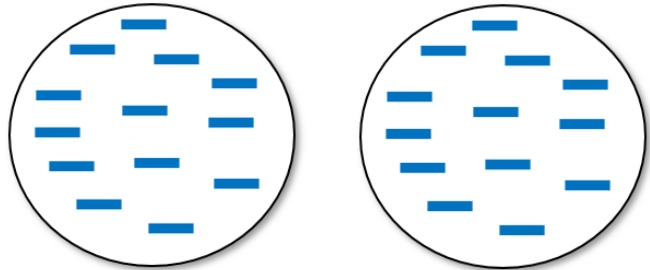
3. Read: Multiplication is the same as:

- times
- groups of
- lots of

For example:

$$13 \times 2$$

- thirteen groups of two OR
- two groups of thirteen



When you are entering numbers into your calculator to do multiplication, it does not matter which order you use, for example,  $13 \times 2$  is the same as  $2 \times 13$ .

4. Complete these.

Follow the examples:

a)  $8 \times 7 = 7 \times 8$

b)  $12 \times 6 = 6 \times 12$

c)  $4 \times 2 =$  \_\_\_\_\_

d)  $15 \times 10 =$  \_\_\_\_\_

e)  $23 \times 3 =$  \_\_\_\_\_

f)  $50 \times 9 =$  \_\_\_\_\_

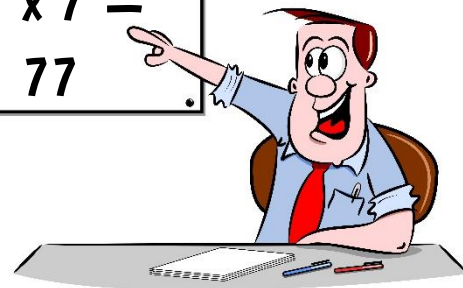
g)  $11 \times 13 =$  \_\_\_\_\_

h)  $5 \times 6 =$  \_\_\_\_\_

$$7 \times 11 =$$

$$11 \times 7 =$$

$$77$$



$$8 \times 6 = 6 \times 8$$

$$= 48$$



5. It may be difficult to estimate your multiplication calculations if you do not know your times tables.

Try your best to learn them off by heart.



### *Multiplication Table*

$1 \times 1 = 1$	$2 \times 1 = 2$	$3 \times 1 = 3$	$4 \times 1 = 4$	$5 \times 1 = 5$
$1 \times 2 = 2$	$2 \times 2 = 4$	$3 \times 2 = 6$	$4 \times 2 = 8$	$5 \times 2 = 10$
$1 \times 3 = 3$	$2 \times 3 = 6$	$3 \times 3 = 9$	$4 \times 3 = 12$	$5 \times 3 = 15$
$1 \times 4 = 4$	$2 \times 4 = 8$	$3 \times 4 = 12$	$4 \times 4 = 16$	$5 \times 4 = 20$
$1 \times 5 = 5$	$2 \times 5 = 10$	$3 \times 5 = 15$	$4 \times 5 = 20$	$5 \times 5 = 25$
$1 \times 6 = 6$	$2 \times 6 = 12$	$3 \times 6 = 18$	$4 \times 6 = 24$	$5 \times 6 = 30$
$1 \times 7 = 7$	$2 \times 7 = 14$	$3 \times 7 = 21$	$4 \times 7 = 28$	$5 \times 7 = 35$
$1 \times 8 = 8$	$2 \times 8 = 16$	$3 \times 8 = 24$	$4 \times 8 = 32$	$5 \times 8 = 40$
$1 \times 9 = 9$	$2 \times 9 = 18$	$3 \times 9 = 27$	$4 \times 9 = 36$	$5 \times 9 = 45$
$1 \times 10 = 10$	$2 \times 10 = 20$	$3 \times 10 = 30$	$4 \times 10 = 40$	$5 \times 10 = 50$
$6 \times 1 = 6$	$7 \times 1 = 7$	$8 \times 1 = 8$	$9 \times 1 = 9$	$10 \times 1 = 10$
$6 \times 2 = 12$	$7 \times 2 = 14$	$8 \times 2 = 16$	$9 \times 2 = 18$	$10 \times 2 = 20$
$6 \times 3 = 18$	$7 \times 3 = 21$	$8 \times 3 = 24$	$9 \times 3 = 27$	$10 \times 3 = 30$
$6 \times 4 = 24$	$7 \times 4 = 28$	$8 \times 4 = 32$	$9 \times 4 = 36$	$10 \times 4 = 40$
$6 \times 5 = 30$	$7 \times 5 = 35$	$8 \times 5 = 40$	$9 \times 5 = 45$	$10 \times 5 = 50$
$6 \times 6 = 36$	$7 \times 6 = 42$	$8 \times 6 = 48$	$9 \times 6 = 54$	$10 \times 6 = 60$
$6 \times 7 = 42$	$7 \times 7 = 49$	$8 \times 7 = 56$	$9 \times 7 = 63$	$10 \times 7 = 70$
$6 \times 8 = 48$	$7 \times 8 = 56$	$8 \times 8 = 64$	$9 \times 8 = 72$	$10 \times 8 = 80$
$6 \times 9 = 54$	$7 \times 9 = 63$	$8 \times 9 = 72$	$9 \times 9 = 81$	$10 \times 9 = 90$
$6 \times 10 = 60$	$7 \times 10 = 70$	$8 \times 10 = 80$	$9 \times 10 = 90$	$10 \times 10 = 100$

There is also a multiplication table in **Appendix I**. If you don't know your tables, keep the table with you when you work with multiplication and division.

6. Remember this:

- ▣ To multiply any number by 10, just add ONE zero on the end.
- ▣ Example:  $78 \times 10$  (add a zero onto 78) = 780
- ▣ To multiply any number by 100, just add TWO zeros on the end.
- ▣ Example:  $78 \times 100$  (add two zeros onto 78) = 7,800
- ▣ To multiply any number by 1,000, just add THREE zeros on the end.
- ▣ Example:  $78 \times 1,000$  (add three zeros onto 78) = 78,000

This will help you when you estimate!

7. Do these and you can check with your calculator!

a)  $10 \times 315 =$  \_\_\_\_\_

b)  $3,560 \times 10 =$  \_\_\_\_\_

c)  $35 \times 100 =$  \_\_\_\_\_

d)  $100 \times 6,200 =$  \_\_\_\_\_

e)  $10 \times 1,200 =$  \_\_\_\_\_

f)  $100 \times 130 =$  \_\_\_\_\_

g)  $1,000 \times 250 =$  \_\_\_\_\_

h)  $38 \times 1,000 =$  \_\_\_\_\_

i)  $10 \times 5,000 =$  \_\_\_\_\_

j)  $16 \times 100 =$  \_\_\_\_\_



**Help each other out!**



To help with estimating, you can easily multiply numbers that end in zero. It involves multiplying the other numbers together and then adding the zeros at the end.

Examples:

□  $50 \times 8 = ?$

Multiply:  $5 \times 8 = 40$ , then add a zero = 400

□  $90 \times 11 = ?$

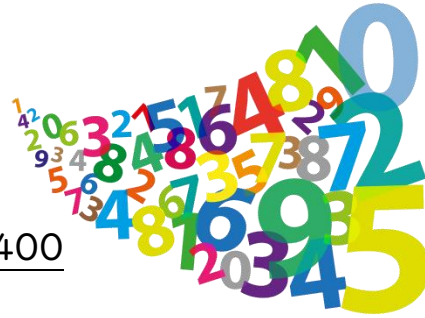
Multiply:  $9 \times 11 = 99$ , then add a zero = 990

□  $300 \times 8 = ?$

Multiply:  $3 \times 8 = 24$ , then add two zeros = 2,400

□  $12 \times 600 = ?$

Multiply:  $12 \times 6 = 72$ , then add two zeros = 7,200



8. Write the answers and then check with the calculator.

a)  $40 \times 3 =$  \_\_\_\_\_

j)  $7 \times 400 =$  \_\_\_\_\_

b)  $8 \times 20 =$  \_\_\_\_\_

k)  $700 \times 6 =$  \_\_\_\_\_

c)  $70 \times 6 =$  \_\_\_\_\_

l)  $600 \times 11 =$  \_\_\_\_\_

d)  $50 \times 11 =$  \_\_\_\_\_

m)  $200 \times 12 =$  \_\_\_\_\_

e)  $80 \times 9 =$  \_\_\_\_\_

n)  $15 \times 300 =$  \_\_\_\_\_

f)  $30 \times 15 =$  \_\_\_\_\_

o)  $3 \times 1100 =$  \_\_\_\_\_

g)  $60 \times 11 =$  \_\_\_\_\_

p)  $8 \times 900 =$  \_\_\_\_\_

h)  $12 \times 40 =$  \_\_\_\_\_

q)  $11 \times 120 =$  \_\_\_\_\_

i)  $200 \times 9 =$  \_\_\_\_\_

r)  $8 \times 300 =$  \_\_\_\_\_

**Try some calculations using the calculator on your mobile phone.**





9. Estimate and write the answers. Remember: When you multiply by 10, you simply add a 0 to the number, e.g.  $12 \times 10 = 120$ . You may not need your calculator at all!

a)  $3 \times 10 =$  \_\_\_\_\_

b)  $0 \times 10 =$  \_\_\_\_\_

c)  $14 \times 10 =$  \_\_\_\_\_

d)  $37 \times 10 =$  \_\_\_\_\_

e)  $0 \times 10 =$  \_\_\_\_\_

f)  $27 \times 10 =$  \_\_\_\_\_

g)  $6 \times 10 =$  \_\_\_\_\_

h)  $48 \times 10 =$  \_\_\_\_\_

i)  $31 \times 10 =$  \_\_\_\_\_

j)  $10 \times 10 =$  \_\_\_\_\_

k)  $1 \times 10 =$  \_\_\_\_\_

l)  $22 \times 10 =$  \_\_\_\_\_

m)  $69 \times 10 =$  \_\_\_\_\_

n)  $7 \times 10 =$  \_\_\_\_\_

o)  $18 \times 10 =$  \_\_\_\_\_

p)  $75 \times 10 =$  \_\_\_\_\_

q)  $6 \times 10 =$  \_\_\_\_\_

r)  $4 \times 10 =$  \_\_\_\_\_

s)  $50 \times 10 =$  \_\_\_\_\_

t)  $99 \times 10 =$  \_\_\_\_\_

u)  $77 \times 10 =$  \_\_\_\_\_

v)  $2 \times 10 =$  \_\_\_\_\_

10. Mark these as correct ✓ or incorrect ✗. Fix the incorrect ones!

a)  $70 \times 3 = 210$

b)  $68 \times 2 = 126$

c)  $14 \times 3 = 32$

d)  $46 \times 7 = 322$

e)  $17 \times 2 = 35$

f)  $16 \times 7 = 112$

g)  $54 \times 6 = 224$

h)  $69 \times 2 = 138$

i)  $51 \times 7 = 257$

j)  $77 \times 6 = 462$

k)  $59 \times 5 = 195$

l)  $14 \times 3 = 42$

m)  $27 \times 6 = 161$

n)  $48 \times 9 = 422$

o)  $14 \times 9 = 226$

p)  $31 \times 9 = 279$

q)  $78 \times 8 = 624$

r)  $69 \times 5 = 345$

11. Group Work: Do these multiplication puzzles.

As a group, talk about what you think the answer is. Circle it. Then use the calculator to check the answer.

a)  $19 \times 41 =$              $229$     or    $499$     or    $779$     or    $999$

---

b)  $32 \times 18 =$              $126$     or    $226$     or    $336$     or    $576$

---

c)  $11 \times 59 =$              $349$  or  $649$  or  $859$  or  $999$

---

d)  $38 \times 21 =$              $198$  or  $469$  or  $798$  or  $1058$

---

e)  $49 \times 31 =$              $519$  or  $1519$  or  $1829$  or  $1949$

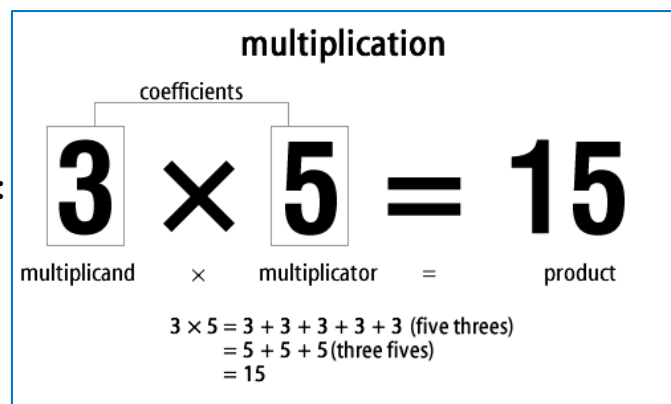
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f)  $21 \times 59 =$              $849$  or  $949$  or  $1039$  or  $1239$

---

12. Correct your own work and give yourselves a mark out of 6.

13. Look at the different terms:



14. Read what the words mean:

- double =  $\times 2$
- triple =  $\times 3$
- quadruple =  $\times 4$
- twice as many =  $\times 2$



15. Write the answers. Use your calculator to check your answers.

- a) Leon used to earn €100.00 per week. Now he earns triple that amount. How much does Leon earn per week now? \_\_\_\_\_
- b) There were 5 students in this class and the number has quadrupled. How many students are there now? \_\_\_\_\_
- c) The doctor told me to double my medicine dosage of 5ml once a day. How much should I take? \_\_\_\_\_
- d) Ella tripled her score of 12. What was her final score? \_\_\_\_\_
- e) You were told to double-check your work. How many times should you check it? \_\_\_\_\_
- f) Neill did the 42-kilometre walk twice. How many kilometres did he walk? \_\_\_\_\_
- g) I usually use 2 cups of flour to make scones but now I must quadruple the recipe for a party. How many cups of flour should I use? \_\_\_\_\_
- h) Dave tripled his investment of €500. How much did he have then? \_\_\_\_\_
- i) The smoothies used to cost €2.50. Now they have doubled in price! How much are the smoothies now? \_\_\_\_\_
- j) When you double-click with your computer mouse, how many times are you clicking the mouse? \_\_\_\_\_



16. What kind of 'doubles' are these? Choose the correct words:

**cheeseburger, date, bass, six, line, 07, click, decker, bed**



- A. Double \_\_\_\_\_
- B. Double \_\_\_\_\_
- C. Double \_\_\_\_\_
- D. Double \_\_\_\_\_
- E. Double \_\_\_\_\_

- F. Double \_\_\_\_\_
- G. James Bond, Double \_\_\_\_\_
- H. Double \_\_\_\_\_
- I. Double \_\_\_\_\_

17. This exercise is about the magic of 101.

Use the calculator to work out the answers to these multiplications.

a)  $101 \times 5511$  \_\_\_\_\_

b)  $101 \times 1155$  \_\_\_\_\_

c)  $101 \times 3311$  \_\_\_\_\_

d)  $101 \times 2277$  \_\_\_\_\_



18. Something strange happens when you multiply these numbers by 101. Talk about it as a group. What do think the answer will be to  $101 \times 2233$ ?

Make sure everyone understands. Then try these in your head and write down the answers. Check them afterwards with the calculator. Tick them if you got them right and correct them if you got them wrong!

a)  $101 \times 2244$  \_\_\_\_\_

d)  $101 \times 4411$  \_\_\_\_\_

b)  $101 \times 6633$  \_\_\_\_\_

e)  $101 \times 3355$  \_\_\_\_\_

c)  $101 \times 5522$  \_\_\_\_\_

f)  $101 \times 1188$  \_\_\_\_\_

19. Now, try these as a group: (guess, then check with the calculator)

a)  $101 \times 2424$  \_\_\_\_\_

f)  $101 \times 2323$  \_\_\_\_\_

b)  $101 \times 3535$  \_\_\_\_\_

g)  $101 \times 4343$  \_\_\_\_\_

c)  $101 \times 2020$  \_\_\_\_\_

h)  $101 \times 4242$  \_\_\_\_\_

d)  $101 \times 4141$  \_\_\_\_\_

i)  $101 \times 2525$  \_\_\_\_\_

e)  $101 \times 3131$  \_\_\_\_\_

j)  $101 \times 3636$  \_\_\_\_\_



b) The farmer has 45 kg of seed. He needs double this amount. How much does he need?

---

---

c) Kylie is saving for a car and has €535.00 in her bank account. How much would she have if she trebled the amount?

---

---



d) Anne works a 30-hour week. How many hours does she work in four weeks?

---

---

e) Greg earns €600.00 per week. How much will he earn in one year? (Hint: There are 52 weeks in a year)

---

---

f) I bought six plants and they each cost €11.00. How much did I spend on all the plants?

---

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## D. DIVISION WITH YOUR CALCULATOR

---

1. Read:

Division is a fast form of repeated subtraction in the same way that multiplication is a fast form of addition.

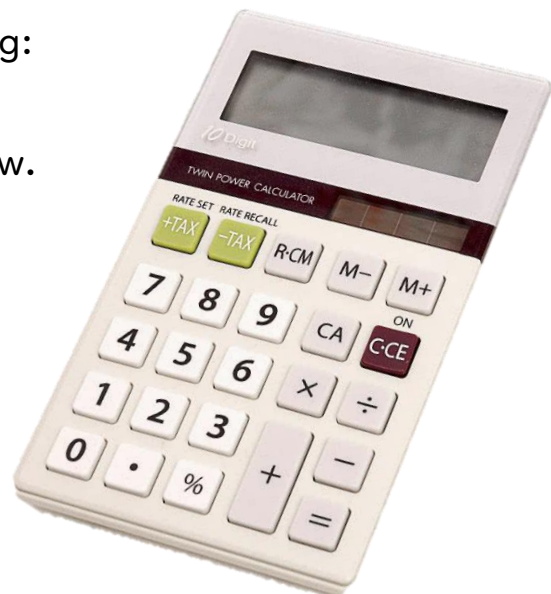
If you want to find out how many threes there are in 18 you could keep subtracting three until you get to zero. The number of times you subtract will be your answer. A quicker way is to divide 18 by three.

- 1)  $18 - 3 = 15,$
- 2)  $15 - 3 = 12,$
- 3)  $12 - 3 = 9,$
- 4)  $9 - 3 = 6,$
- 5)  $6 - 3 = 3,$
- 6)  $3 - 3 = 0$

Or  $18 \div 3 = 6$

2. Look at your calculator. Find the  $\div$  key and the = key.

- a) Estimate then calculate the following:
- b)  $35 \div 5 =$
- c) Write the answer in the display below.



3. As with multiplication, it may be difficult to estimate your division calculations if you do not know your times tables.

Division is related to multiplication.

Example:

$$2 \times 5 = 10$$

$$\text{So, } 10 \div 2 = 5$$

$$\text{And, } 10 \div 5 = 2$$

Do the same with the sums below. Follow the example:

a)  $11 \times 2 = 22$

So, \_\_\_\_\_

And, \_\_\_\_\_

b)  $13 \times 3 = 39$

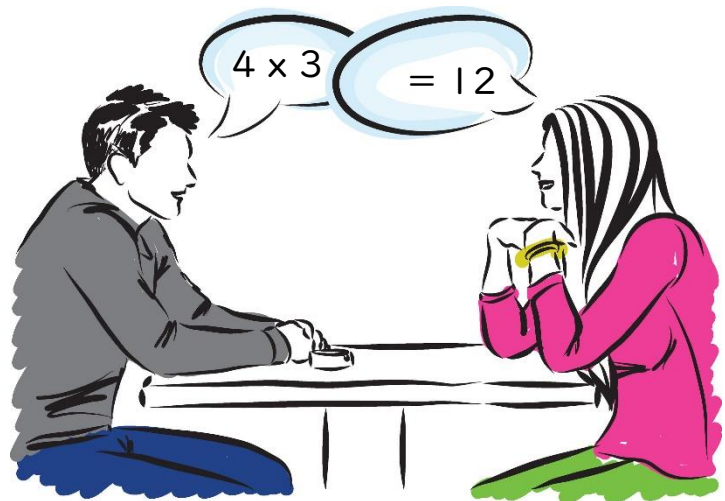
So, \_\_\_\_\_

And, \_\_\_\_\_

c)  $7 \times 8 = 56$

So, \_\_\_\_\_

And, \_\_\_\_\_





4. Read: Division is the same as:

- sharing out
- grouping

- halving
- dividing

Example:

There are 54 blocks below.

How many groups of 6 are there?

Or – what is  $54 \div 6 = ?$



**See the  
Division  
Facts in  
Appendix 2.**

Draw the groups – the first one is done for you.


5. How many groups of 6 are there? \_\_\_\_\_

6. So,  $54 \div 6 =$  \_\_\_\_\_

7. Are these numbers divisible by 3?

To see if a number is divisible by three, add up the digits. If the sum is divisible by three, so is the number. Note: this also works for 9.

Circle the numbers that are divisible by 3

1,128

2,101

2,235

3,122

4,445

2,088

9,457

5,004

6,625

7,134

9,120

5,228

4,002

1,124

7,886

9,999

3



**Example: Is 3627 evenly divisible by 3? If you add up the digits, it comes to 18, which is divisible by 3! So that means that 3627 is divisible by 3!**

8. Circle the numbers that are divisible by 9

9,099

1,145

8,089

6,228

9

9,139

4,950

6,192

4,383

4,188

1,099

7,144

1,926

8,865

9,455

3,322

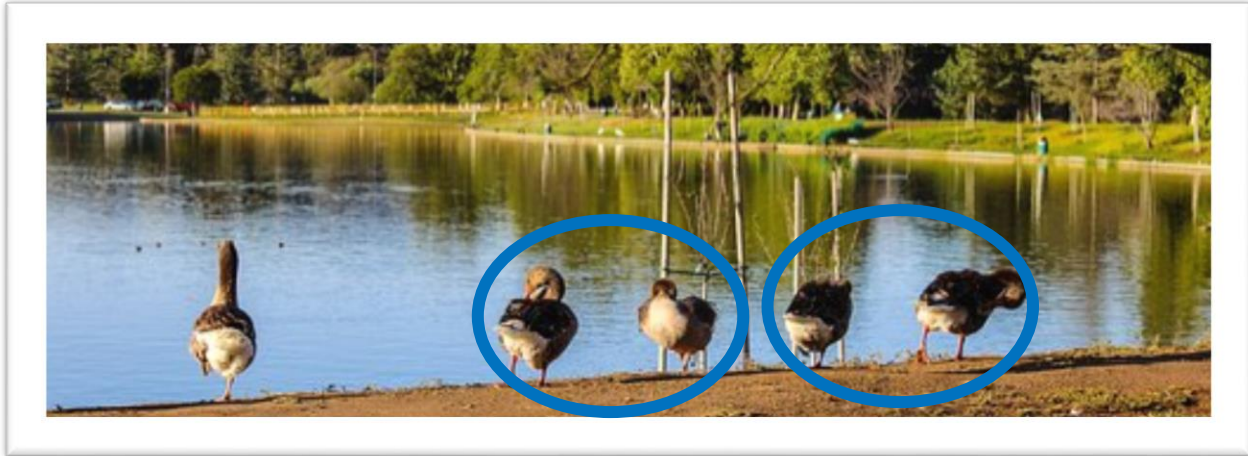
2,997

9. Sometimes, numbers do not go evenly into another number.

Example:

There are 5 ducks below. How many pairs are there? (Or: how many groups of 2?)

$$5 \div 2 = ?$$



There are 2 groups of 2 and 1 is left.

You say there are 2 groups of 2, remainder 1.

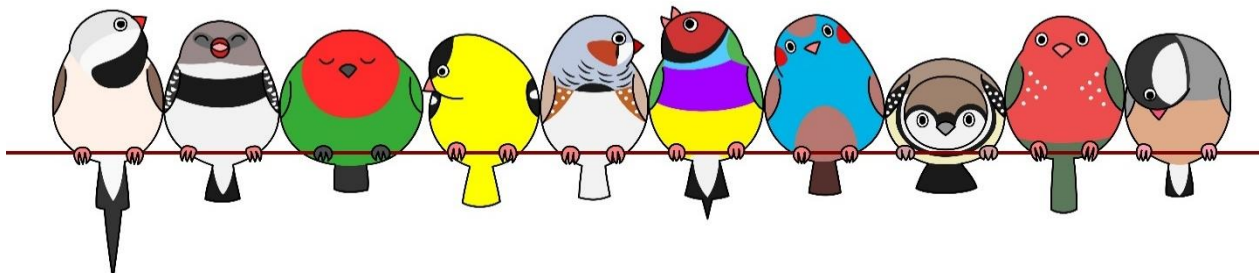
$$5 \div 2 = 2, \text{ remainder } 1$$

Do the same below:

a) How many groups of 3 are there?

b) Write the number sentence: \_\_\_\_\_

c) Draw the groups:



d) Write the number sentence and answer: \_\_\_\_\_



10. Here are some division tricks

Here's a quick way to know when a number can be evenly divided by these certain numbers:

- 10: if the number ends in 0
- 9: when the digits are added together, and the total is evenly divisible by 9
- 5: if it ends in a 0 or 5
- 4: if it ends in 00 or a two-digit number that is evenly divisible by 4
- 3: when the digits are added together, and the result is evenly divisible by the number 3
- 2: if it ends in 0, 2, 4, 6, or 8

Are these evenly divisible? (So there are no remainders) Write Y or N.

a)  $30 \div 5$  \_\_\_\_\_

YES

b)  $65 \div 10$  \_\_\_\_\_

NO

c)  $464 \div 2$  \_\_\_\_\_

d)  $135 \div 3$  \_\_\_\_\_

e)  $880 \div 10$  \_\_\_\_\_

f)  $68 \div 3$  \_\_\_\_\_

g)  $183 \div 5$  \_\_\_\_\_

h)  $612 \div 4$  \_\_\_\_\_

i)  $43 \div 2$  \_\_\_\_\_

j)  $114 \div 4$  \_\_\_\_\_



11. Estimate and then calculate:

(Hint: You can use your multiplication table to help you estimate!)

a)  $42 \div 6 =$  \_\_\_\_\_

n)  $42 \div 7 =$  \_\_\_\_\_

b)  $60 \div 6 =$  \_\_\_\_\_

o)  $54 \div 9 =$  \_\_\_\_\_

c)  $8 \div 8 =$  \_\_\_\_\_

p)  $27 \div 9 =$  \_\_\_\_\_

d)  $48 \div 8 =$  \_\_\_\_\_

q)  $35 \div 5 =$  \_\_\_\_\_

e)  $36 \div 4 =$  \_\_\_\_\_

r)  $4 \div 4 =$  \_\_\_\_\_

f)  $56 \div 7 =$  \_\_\_\_\_

s)  $45 \div 5 =$  \_\_\_\_\_

g)  $15 \div 5 =$  \_\_\_\_\_

t)  $16 \div 4 =$  \_\_\_\_\_

h)  $18 \div 9 =$  \_\_\_\_\_

u)  $63 \div 7 =$  \_\_\_\_\_

i)  $28 \div 4 =$  \_\_\_\_\_

v)  $30 \div 5 =$  \_\_\_\_\_

j)  $16 \div 4 =$  \_\_\_\_\_

w)  $40 \div 4 =$  \_\_\_\_\_

k)  $42 \div 6 =$  \_\_\_\_\_

x)  $8 \div 4 =$  \_\_\_\_\_

l)  $4 \div 4 =$  \_\_\_\_\_

y)  $49 \div 7 =$  \_\_\_\_\_

m)  $54 \div 6 =$  \_\_\_\_\_

z)  $45 \div 5 =$  \_\_\_\_\_

**Try some calculations using the calculator on your mobile phone.**



12. Mark these as correct ✓ or incorrect ✗. Fix the incorrect ones!

a)  $54 \div 9 = 5$

h)  $8 \div 8 = 0$

o)  $14 \div 7 = 2$

b)  $49 \div 7 = 6$

i)  $63 \div 9 = 5$

p)  $42 \div 6 = 7$

c)  $63 \div 7 = 9$

j)  $42 \div 6 = 8$

q)  $56 \div 7 = 7$

d)  $70 \div 8 = 10$

k)  $45 \div 9 = 4$

r)  $81 \div 8 = 10$

e)  $12 \div 6 = 2$

l)  $90 \div 9 = 10$

s)  $30 \div 6 = 5$

f)  $35 \div 7 = 5$

m)  $18 \div 6 = 3$

t)  $24 \div 8 = 30$

g)  $28 \div 7 = 4$

n)  $81 \div 9 = 9$

u)  $54 \div 9 = 6$



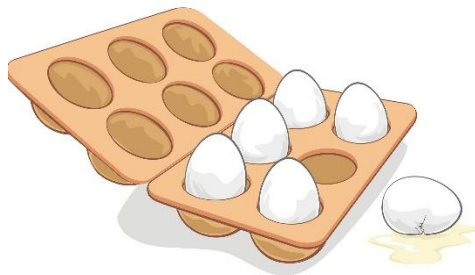
13. Read the meanings of the word:

- half = divide  $\div$  by 2
- third = divide  $\div$  by 3
- quarter = divide  $\div$  by 4



14. Estimate and calculate:

a) I made 12 muffins and my friend ate a third of them! How many muffins did my friend want? \_\_\_\_\_



b) If you use half a carton of 6 eggs, how many eggs will you use?  
\_\_\_\_\_

c) My friend asked me half of my money! I had €100.00. How much did my friend want? \_\_\_\_\_

d) There are 24 hours in a day. If you sleep for a third of a day, how many hours do you sleep? \_\_\_\_\_

e) Linda is half the age of her brother. Her brother is 40 years old. How old is Linda?  
\_\_\_\_\_



f) My rent is €400.00 per month. I pay a quarter of it every week. How much do I pay every week?  
\_\_\_\_\_

g) Paul paid half the bill of €10.10. How much did Paul pay?  
\_\_\_\_\_



h) There were 24 students in the class. Half of them wanted to go to the café for lunch. How many did not want to go to the café?

\_\_\_\_\_

i) There were 44 people in the restaurant. A quarter of them ordered pasta. How many people ordered pasta? \_\_\_\_\_



j) A pizza is cut into thirds. How many pieces of pizza are there? \_\_\_\_\_

k) Emily worked for 6 hours. For a third of this time, she was on the computer. How many hours did she spend at the computer?

\_\_\_\_\_

l) There are 60 minutes in one hour. How many minutes are there in a quarter of an hour? \_\_\_\_\_

15. Estimate and then calculate:

	Estimate	Calculate
$208 \div 26 =$		
$774 \div 43 =$		
$966 \div 14 =$		
$874 \div 46 =$		
$568 \div 71 =$		



**You can use your  
multiplication table to help  
you!**





17. You are going to try some strange division!

On the calculator, try 7 divided by 2. Look at the answer. It is quite strange. The calculator cannot give a remainder. Discuss with your group what is happening. Then try 11 divided by 4. Try 13 divided by 8. Try 23 divided by 16. Now try 4 divided by 3. Try other numbers divided by 3 and see what happens.



Try 5 divided by 3, 6 divided by 3, 7 divided by 3.

These are some decimal numbers that never end.

Did you notice that there were three kinds of answer when you divide by 3?

1. Some go exactly like 12 divided by 3
2. Some give .3333333333 after the decimal point like 4 divided by 3
3. Some give .6666666666 after the decimal point

18. Now see what happens to other numbers when divided by 3. Can you guess what the answers might look like? Talk about it and use the calculator to work out the answers. You only need to write two numbers after the decimal point.

a)  $30 \div 3 =$  \_\_\_\_\_

f)  $68 \div 3 =$  \_\_\_\_\_

b)  $31 \div 3 =$  \_\_\_\_\_

g)  $300 \div 3 =$  \_\_\_\_\_

c)  $32 \div 3 =$  \_\_\_\_\_

h)  $301 \div 3 =$  \_\_\_\_\_

d)  $66 \div 3 =$  \_\_\_\_\_

i)  $302 \div 3 =$  \_\_\_\_\_

e)  $67 \div 3 =$  \_\_\_\_\_

j)  $4 \div 3 =$  \_\_\_\_\_



19. You are going to do some division word problems.

Remember the steps to follow when working out a word problem:

- A. Always read the problem very carefully.
- B. Understand the question. What is the question asking you to do?
- C. Choose the right method for the problem.
- D. Use the right skills to solve the problem.
- E. Write down the answer in the right way e.g. showing your working out.
- F. Word problems often have real answers that are units of measurement e.g. kg. Make sure that you add the unit of measure. Often - 'A word problem has a word answer'.

20. Work out the answers to the following problems. Write the number sentences and answers!

a) A full packet of biscuits contains 32 biscuits. How many packets are needed for 256 biscuits?

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b) Last weekend you went away with two friends and agreed to share the camping costs of €99.00. How much does each person have to pay if you share the costs equally?

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---



c) Alex has bought 2 pieces of fish from the fish and chip shop. He shares the fish equally with three other friends. How many pieces does each of them get?



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d) Diane wants to get her garden landscaped which will cost €672.00. She works out that she can save €32.00 per week for her garden.

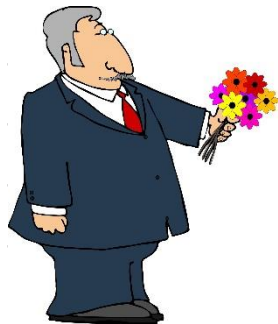
How many weeks will it take Diane to save for the garden?

---

How many weeks will it take if she can save €56.00 each week?

---

e) The flower shop sold €620.00 in two days by selling bouquets of flowers @ €10.00 each. How many bouquets were sold during the two days?



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# DECIMALS, FRACTIONS & PERCENTAGES ON THE CALCULATOR





## A. DECIMALS WITH YOUR CALCULATOR

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1. Read:

Fractions and decimals are two different ways to represent parts of a whole number. Decimals are a way to express tenths, hundredths, thousandths and more, of a unit.

Look at an example of place value:

421.563

Hundreds	Tens	Units	.	Tenths	Hundredths	Thousandths
4	2	1	.	5	6	3

2. Look at this number and answer the questions:

907.25

- a) How many tens are there? \_\_\_\_\_
- b) How many tenths are there? \_\_\_\_\_
- c) How many hundreds are there? \_\_\_\_\_
- d) How many units are there? \_\_\_\_\_
- e) How many hundredths are there? \_\_\_\_\_





3. Write these numbers into the correct columns.

- a) 32.67
- g) 63.8
- b) 199.4
- h) 999.02
- c) 570
- i) 18.18
- d) 208.05
- j) 80.3
- e) 4.5
- k) 100.25
- f) 710.99
- l) 852.01

Hundreds	Tens	Units	.	Tenths	Hundredths	Thousandths

4. When you write a euro amount, such as €2.45, there are only two places after the decimal point.

The number after the decimal point are cents –they are not a whole euro.



€2.45

This is two euro and forty-five cents.

Where a number is written e.g. €7.00, it is not necessary to enter the .00 on the calculator.

€7.00

This is seven euro. (and no cents)



5. Write the amounts in words:

a) €5.21

---

b) €10.00

---

c) €0.68

---

d) €3.95

---

6. Read: Decimals are used where part or all or all of the number is not a whole number.

Examples:

- ▣ You need 0.5 kilograms of flour to make bread. This is half a kilogram, so it's not a full kilogram.
- ▣ You need 1.5 litres of milk for the recipe. This is one whole litre of milk and another half a litre.
- ▣ Kieran ran 5.5 kilometres. This is five and a half kilometres.
- ▣ The table is 1.25 metres long. This is one and a quarter metres.



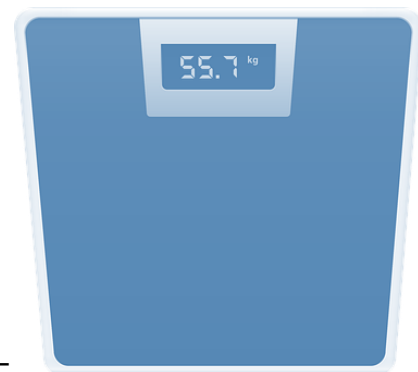
Here are some common decimals you should learn:

Words	Fractions	Decimals
Half	$\frac{1}{2}$	0.5
Quarter	$\frac{1}{4}$	0.25
Three Quarters	$\frac{3}{4}$	0.75

7. Write the values:

Example: 3.5 kg = 3 and a half kg

- a) 2.25 m = \_\_\_\_\_
- b) 0.5 km = \_\_\_\_\_
- c) 10.75 g = \_\_\_\_\_
- d) 250.5 ml = \_\_\_\_\_



8. Read: Rounding decimals is a skill you must learn to estimate calculations.

Rounding to the nearest euro is common. When rounding, remember if it's five or more, you round up. Anything else, you round down. When rounding to the nearest euro, look at the number that follows the **decimal** point. If it is five or more – round up to the next euro. Keep the euro amount the same if the number after the decimal point is four or less.

Example:

€75.43 – look at the number after the decimal point  
The number is a 4, which is less than 5, so –  
The euro amount stays the same – €75.00

€75.53 – look at the number after the decimal point  
The number is a 5, so –  
It rounds up to the next euro – €76.00



9. Round these euro amounts:

a) € 61.33 – € \_\_\_\_\_

k) € 462.27 – € \_\_\_\_\_

b) € 29.67 – € \_\_\_\_\_

l) € 679.37 – € \_\_\_\_\_

c) € 96.89 – € \_\_\_\_\_

m) € 859.76 – € \_\_\_\_\_

d) € 97.94 – € \_\_\_\_\_

n) € 681.24 – € \_\_\_\_\_

e) € 36.12 – € \_\_\_\_\_

o) € 859.17 – € \_\_\_\_\_

f) € 84.35 – € \_\_\_\_\_

p) € 861.18 – € \_\_\_\_\_

g) € 65.94 – € \_\_\_\_\_

q) € 936.66 – € \_\_\_\_\_

h) € 81.23 – € \_\_\_\_\_

r) € 717.99 – € \_\_\_\_\_

i) € 53.41 – € \_\_\_\_\_

s) € 473.63 – € \_\_\_\_\_

j) € 48.18 – € \_\_\_\_\_

t) € 856.75 – € \_\_\_\_\_

10. Read: Remember, decimals are fractional numbers. The decimal 0.3 is the same as the fraction  $\frac{3}{10}$ . The number 0.78 is a decimal that represents  $\frac{78}{100}$ .

Adding decimals is just like adding other numbers.

11. Always line up the decimal points when adding decimals vertically.

Try these:

$$\begin{array}{r} 1.2 \\ 2.7 \\ \hline + \end{array}$$

$$\begin{array}{r} 3.4 \\ 2.1 \\ \hline + \end{array}$$

$$\begin{array}{r} 5.5 \\ 1.3 \\ \hline + \end{array}$$



**Remember to put the decimal point in the proper place in your answer.**



12. Estimate and then calculate with your calculator:

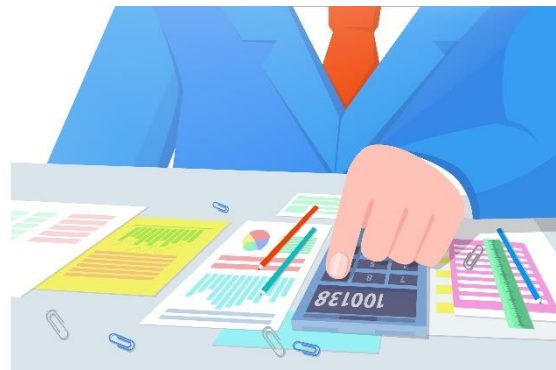
Addition	Your Estimate	Calculation	Were you close?
$31.7 + 10.2$			
$4.9 + 8.7$			
$20.3 + 69.9$			
$1.9 + 1.9$			
$42.5 + 7.5$			
$13.8 + 11.7$			



13. These calculator displays are showing euro and cents.

Write them properly using a euro sign and two digits for the cents.

- a) 7.6 = \_\_\_\_\_
- b) 10.20 = \_\_\_\_\_
- c) 9 = \_\_\_\_\_
- d) 4.5 = \_\_\_\_\_
- e) 4.07 = \_\_\_\_\_
- f) 100.4 = \_\_\_\_\_



14. How would a calculator show these amounts?



- a) €5.67 = \_\_\_\_\_
- b) €19.30 = \_\_\_\_\_
- c) €0.56 = \_\_\_\_\_
- d) €13.70 = \_\_\_\_\_

15. Use your calculator to do these

Write the answers correctly using a € sign and two digits for the cents. Estimate the answers first.

- a) €2.12 + €3.78 = \_\_\_\_\_
- b) €4.16 + €3.23 = \_\_\_\_\_
- c) €9.72 - €4.42 = \_\_\_\_\_
- d) €3.82 - €0.99 = \_\_\_\_\_



**Try some calculations using the calculator on your mobile phone.**



16. Find the decimal point on your calculator. Estimate and then use your calculator to add these amounts:

a) €36.17+€34.43 = \_\_\_\_\_

b) €33.31+€33.13 = \_\_\_\_\_

c) €51.42+€47.23 = \_\_\_\_\_

d) €62.37+€46.57 = \_\_\_\_\_

e) €19.42+€68.24 = \_\_\_\_\_

f) €83.14+€78.95 = \_\_\_\_\_

g) €83.88+€59.15 = \_\_\_\_\_

h) €42.58+€77.49 = \_\_\_\_\_

i) €40.35+€86.35 = \_\_\_\_\_

j) €94.48+€72.27 = \_\_\_\_\_

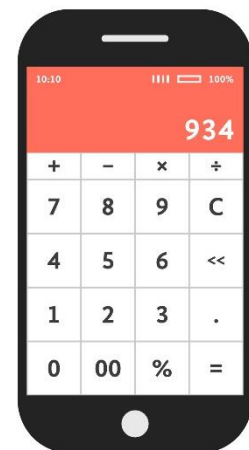
k) €93.98+€49.36 = \_\_\_\_\_

l) €74.81+€65.27 = \_\_\_\_\_

m) €81.67+€37.39 = \_\_\_\_\_



**Try some calculations using the calculator on your mobile phone.**



17. Subtraction, multiplication and division of decimals works in the same way as addition.

Estimate and calculate:

a)  $68.56 - 32.35 =$  \_\_\_\_\_

b)  $38.16 - 24.45 =$  \_\_\_\_\_

c)  $59.42 - 36.75 =$  \_\_\_\_\_

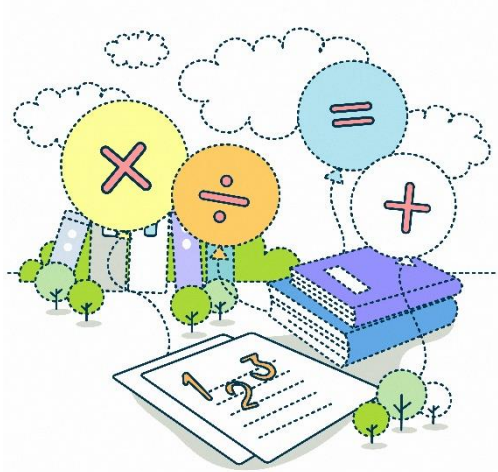
d)  $61.49 - 60.52 =$  \_\_\_\_\_

e)  $77.15 - 51.59 =$  \_\_\_\_\_

f)  $58.45 - 38.69 =$  \_\_\_\_\_

g)  $68.98 - 22.95 =$  \_\_\_\_\_

h)  $79.44 - 63.22 =$  \_\_\_\_\_



18. Which answers do you think match these? Estimate, then check with your calculator.

**60.39, 30.24, 2.09, 15.81, 39.69**

a)  $5.1 \times 3.1$  \_\_\_\_\_

b)  $7.2 \times 4.2$  \_\_\_\_\_

c)  $4.9 \times 8.1$  \_\_\_\_\_

d)  $6.1 \times 9.9$  \_\_\_\_\_

e)  $1.9 \times 1.1$  \_\_\_\_\_



19. Estimate and calculate. Write the number sentences and answers!

a) Jenny has €98.00 in her purse and she spends €3.45 on a sandwich. How much money does she have now?

---

---



b) Tim spends €68.00 on a printer and a further €7.75 on paper. How much did he spend altogether?

---

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c) Regina gave €20.60 altogether to her four children for lunch money. How much money did each child get?

---

---

d) Richard puts €2.45 into the charity box. If he started with €23.00, how much money does he have left?

---

---

e) Amy has €280.00 and Steven has €147.05. How much more does Amy have than Steven?

---

---



f) Larry earns €16.00 per hour working. If he works for 40 hours per week, how much does he earn in one week?

---

---



g) After buying a dog kennel for €54.15, Greg has €4.11 left. How much money did Greg have to begin with?

---

---

h) Craig spent €61.05 on show tickets and a meal and Susan spent €60.55 on the same. How much money did they spend altogether?

---

---

i) The bill for take-away food was €41.00. The total was being shared equally between 4 people. How much should each person give?



---

---

j) Ewa worked to earn €800.00. If she worked for 40 hours, how much money does she earn per hour?






---

---

20. Look at the menu:

## The Quick Café

### MENU

		
Hamburger	€3.25	Coffee 
Cheeseburger 	€3.80	Tea
Veggie burger	€3.50	Fruit juice
Veggie pasta	€4.20	Lemonade 
Lasagne	€5.00	Milkshake
Regular chips 	€2.50	Water
Greek salad	€2.80	

21. How much would these meals cost and what would the change be from €10.00?

a) Hamburger and chips =

Cost: \_\_\_\_\_ Change: \_\_\_\_\_

b) Veggie burger and chips =

Cost: \_\_\_\_\_ Change: \_\_\_\_\_

c) Lasagne and tea =

Cost: \_\_\_\_\_ Change: \_\_\_\_\_

d) Salad, chips and milkshake =

Cost: \_\_\_\_\_ Change: \_\_\_\_\_

e) Veggie burger and lemonade =

Cost: \_\_\_\_\_ Change: \_\_\_\_\_



f) 2 x Veggie pasta =

Cost: \_\_\_\_\_ Change: \_\_\_\_\_

g) Lasagne, 2 x chips =

Cost: \_\_\_\_\_ Change: \_\_\_\_\_

h) Cheeseburger and fruit juice =

Cost: \_\_\_\_\_ Change: \_\_\_\_\_

i) 3 x milkshakes =

Cost: \_\_\_\_\_ Change: \_\_\_\_\_

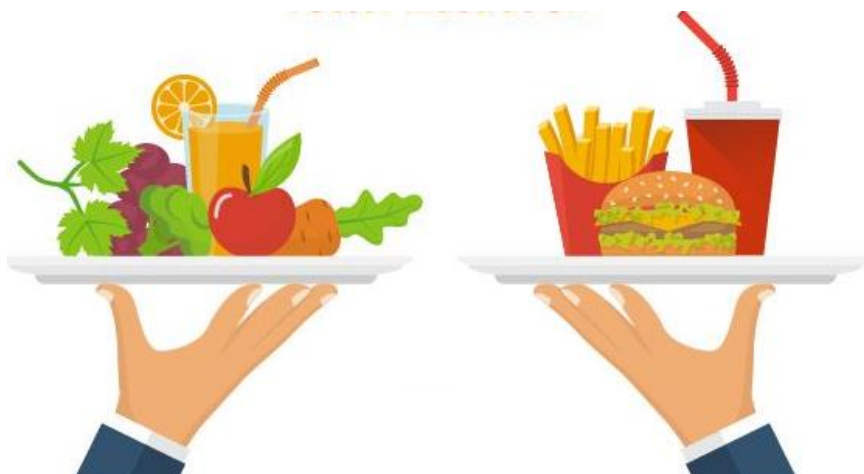
j) 3 x coffees, veggie burger =

Cost: \_\_\_\_\_ Change: \_\_\_\_\_

22. If I had €7.00 and I wanted two coffees and a milkshake, would I have enough money? \_\_\_\_\_

If not, how much more do I need? \_\_\_\_\_

23. If I have €10.00 and I bought a hamburger and cup of tea, how much change should I receive? \_\_\_\_\_



## B. FRACTIONS WITH YOUR CALCULATOR

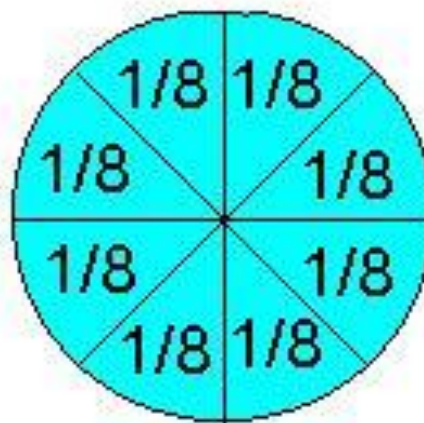
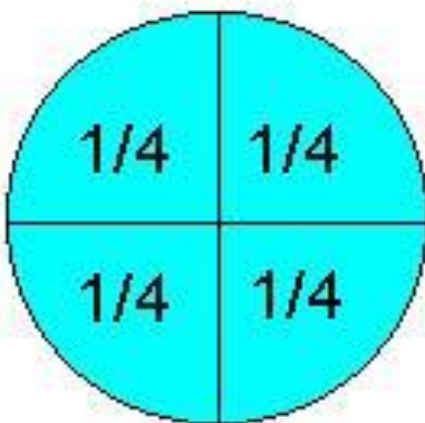
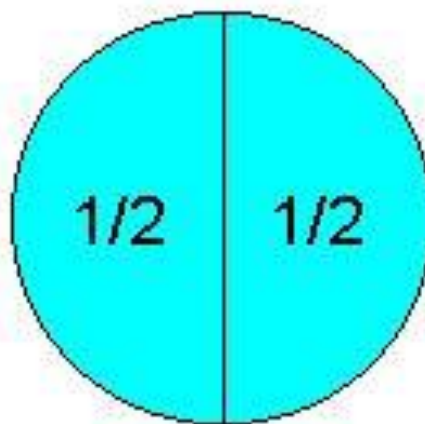
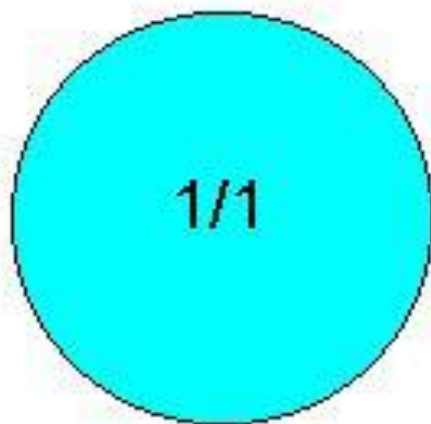
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1. Read: A fraction represents part of a whole. When something is broken up into a number of parts, the fraction shows how many of those parts you have.

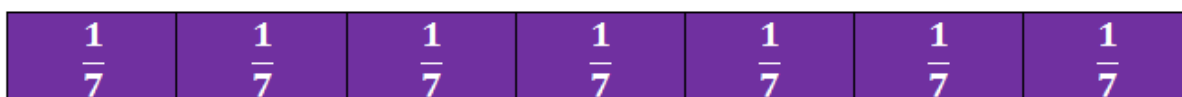
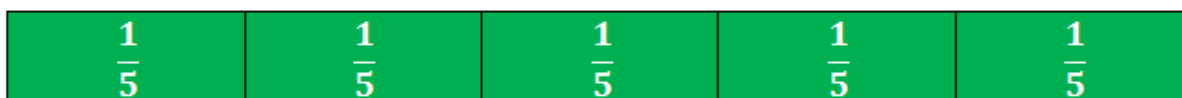
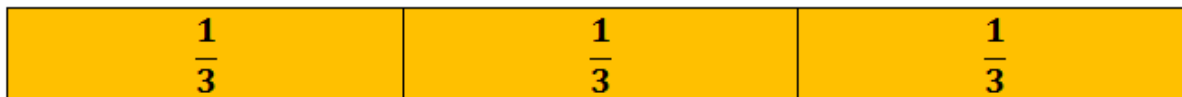
$$\frac{10}{18} \rightarrow \frac{\text{numerator}}{\text{denominator}}$$

This fraction shows that the value is 10 parts out of 18.

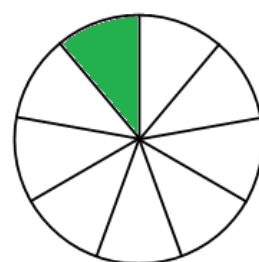
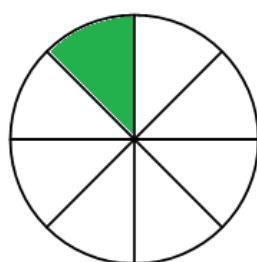
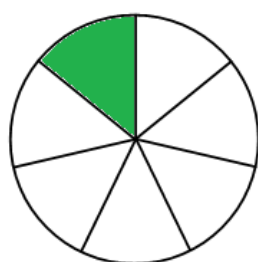
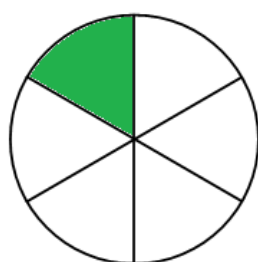
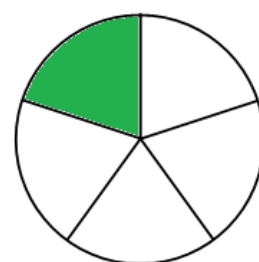
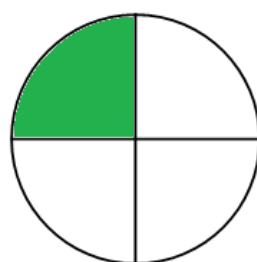
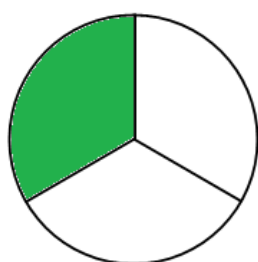
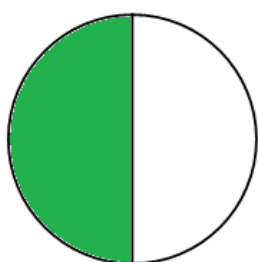
2. Look at these and discuss:



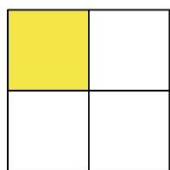
3. Study these:



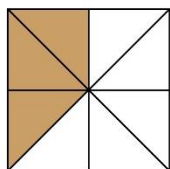
4. What is shaded? Write the fractions.



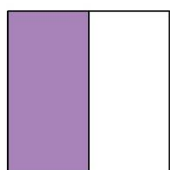
5. Match the pictures and fractions:



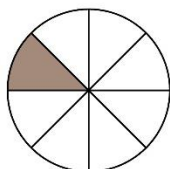
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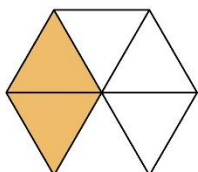
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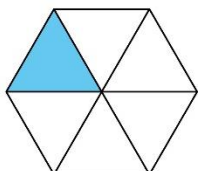
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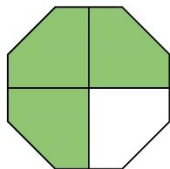
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•

•  $\frac{1}{8}$

•  $\frac{2}{6}$

•  $\frac{1}{4}$

•  $\frac{1}{2}$

•  $\frac{3}{4}$

•  $\frac{1}{3}$

•  $\frac{3}{8}$

•  $\frac{1}{6}$

6. Convert fractions to decimals.

Just divide the top of the fraction by the bottom, and read off the answer!

Example:

What is  $\frac{5}{8}$  as a decimal?



**Always check your calculations.**

Get your calculator and type in  $5 \div 8 =$

Your answer should be 0.625

Write as decimals:

a)  $\frac{6}{10} =$  \_\_\_\_\_

b)  $\frac{41}{100} =$  \_\_\_\_\_

c)  $\frac{76}{100} =$  \_\_\_\_\_

d)  $\frac{3}{10} =$  \_\_\_\_\_

e)  $\frac{36}{100} =$  \_\_\_\_\_

f)  $\frac{7}{10} =$  \_\_\_\_\_

g)  $\frac{25}{100} =$  \_\_\_\_\_

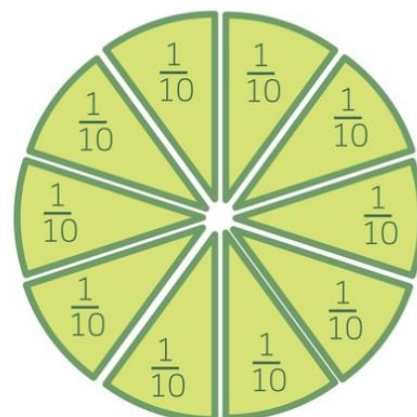
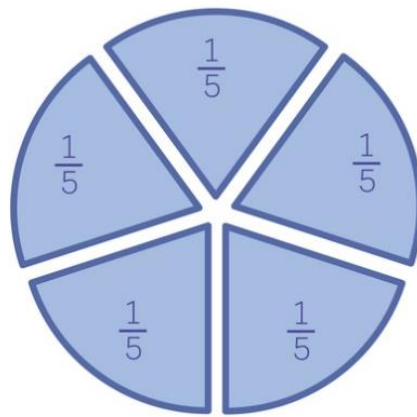
h)  $\frac{4}{10} =$  \_\_\_\_\_

i)  $\frac{54}{100} =$  \_\_\_\_\_

j)  $\frac{37}{100} =$  \_\_\_\_\_

k)  $\frac{9}{10} =$  \_\_\_\_\_

l)  $\frac{21}{100} =$  \_\_\_\_\_



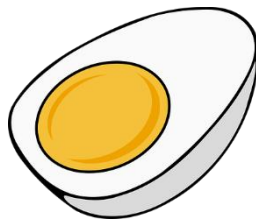


7. Do you remember these decimals? Check your answer, using the calculator.

$\frac{1}{2} =$  \_\_\_\_\_

$\frac{1}{4} =$  \_\_\_\_\_

$\frac{3}{4} =$  \_\_\_\_\_



**$\frac{1}{2} = 50\%$**

8. Write the fractions and calculate the decimal number:



**Try some calculations using the calculator on your mobile phone.**

a) 1 piece – Fraction \_\_\_\_\_ Decimal \_\_\_\_\_

b) 2 pieces – Fraction \_\_\_\_\_ Decimal \_\_\_\_\_

c) 3 pieces – Fraction \_\_\_\_\_ Decimal \_\_\_\_\_

d) 4 pieces – Fraction \_\_\_\_\_ Decimal \_\_\_\_\_

e) 5 pieces – Fraction \_\_\_\_\_ Decimal \_\_\_\_\_

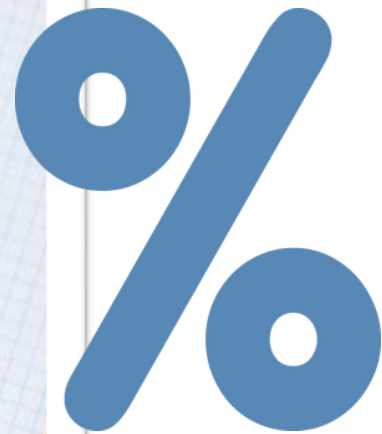
f) 6 pieces – Fraction \_\_\_\_\_ Decimal \_\_\_\_\_



## C. PERCENTAGES ON THE CALCULATOR

Per cent just means 'per hundred'. The symbol is '%'. 1% means 1 out of 100 and as a fraction it is 1/100. A number written as per cent is called a percentage.

1. Do you have a percentage key on your calculator? If so, percentages are easy!



Example:

a) What is 10% of 50?

b) Enter this into the calculator:

$$\boxed{5} \boxed{0} \boxed{\times} \boxed{1} \boxed{0} \boxed{\%} \boxed{=}$$

c) Answer = 5

2. Now, try these yourself:

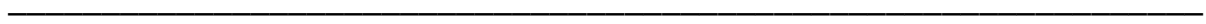
- a) 80% of 20 = \_\_\_\_\_
- b) 80% of 100 = \_\_\_\_\_
- c) 10% of 10 = \_\_\_\_\_
- d) 60% of 70 = \_\_\_\_\_
- e) 30% of 60 = \_\_\_\_\_
- f) 10% of 10 = \_\_\_\_\_
- g) 20% of 70 = \_\_\_\_\_
- h) 60% of 20 = \_\_\_\_\_
- i) 90% of 60 = \_\_\_\_\_
- j) 100% of 90 = \_\_\_\_\_
- k) 80% of 70 = \_\_\_\_\_
- l) 50% of 0 = \_\_\_\_\_
- m) 50% of 90 = \_\_\_\_\_
- n) 70% of 10 = \_\_\_\_\_
- o) 40% of 10 = \_\_\_\_\_
- p) 6% of 100 = \_\_\_\_\_



**50% is the same as half. If I eat 50% of a sandwich, it means I eat half of it!**

3. There is a 50% sale on at my favourite clothing shop.

a) A pair of jeans were priced at €80.00. How much will they be in the sale?



b) If a pair of shoes cost €35 in the sale, how much did they cost before the sale?



4. Answer the questions. Write the number sentences and answers!

a) A test has 20 questions. If Charlie gets 80% correct, how many questions did he get right?

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b) There are 36 workmen in a crew. Half the crew (50%) are working on a construction site. How many workmen is this?

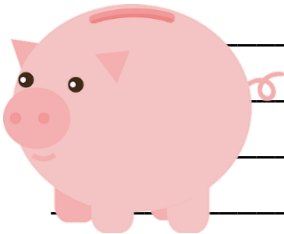
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c) A woman put €480 into a savings account for one year. The rate of interest on the account was 10% per annum. How much interest did she earn in the year? What would the new amount be?



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d) 58% of the people at the event were students. If there were 400 people at the event, how many students were there?

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e) Michael bought a car that he could fix up. He paid 65% of the original price of €9,000. How much did he pay for the car?

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f) There was a 20% discount off a new TV costing €500.00. How much was the discount? How much was the TV with the discount?

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g) There are 32 students in a class. 25% of the students drink tea and the rest drink coffee. How many students drink tea and how many drink coffee?



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5. Do you know that if 2% of 50 is too hard to figure out, you can just flip it – 50% of 2. That’s a lot easier.

‘Flip’ these and work them out:

a) 68% of 10 = \_\_\_\_\_ = \_\_\_\_\_

b) 29% of 1 = \_\_\_\_\_ = \_\_\_\_\_

c) 165% of 20 = \_\_\_\_\_ = \_\_\_\_\_

# CALCULATOR PRACTICE





## A. PATTERNS IN NUMBERS

---

This exercise is about patterns in numbers.

1. Get the answers fast from your calculator:

a)  $1 \times 8 + 1 =$  \_\_\_\_\_

b)  $12 \times 8 + 2 =$  \_\_\_\_\_

c)  $123 \times 8 + 3 =$  \_\_\_\_\_

d)  $1234 \times 8 + 4 =$  \_\_\_\_\_

e)  $12345 \times 8 + 5 =$  \_\_\_\_\_

f)  $123456 \times 8 + 6 =$  \_\_\_\_\_

g)  $1234567 \times 8 + 7 =$  \_\_\_\_\_

h)  $12345678 \times 8 + 8 =$  \_\_\_\_\_

i)  $123456789 \times 8 + 9 =$  \_\_\_\_\_



2. Do you see a pattern? Discuss in your group.

3. Now try this: (continue the pattern like the one above)

a)  $1 \times 9 + 2 =$

b)  $12 \times 9 + 3 =$

c)  $123 \times 9 + 4 =$

d) \_\_\_\_\_

e) \_\_\_\_\_

f) \_\_\_\_\_

g) \_\_\_\_\_

h) \_\_\_\_\_

i) \_\_\_\_\_



4. And try this: (continue with the same pattern)

a)  $1 \times 1 =$

b)  $11 \times 11 =$

c)  $111 \times 111 =$

d) \_\_\_\_\_

e) \_\_\_\_\_

f) \_\_\_\_\_

5. Fill in the missing values; use the number patterns.

a) 246, 287, 260, \_\_\_\_\_, \_\_\_\_\_, 315, 288, 329, \_\_\_\_\_, ...

Pattern: Add 41, then subtract 27

b) 330, 425, 347, \_\_\_\_\_, \_\_\_\_\_, 459, 381, 476, \_\_\_\_\_, ...

Pattern: Add 95, then subtract 78

c) \_\_\_\_\_, \_\_\_\_\_, 409, 426, 330, 347, 251, 268, \_\_\_\_\_, ...

Pattern: Add 17, then subtract 96

d) 4, 8, 16, 32, \_\_\_\_\_, \_\_\_\_\_, ...

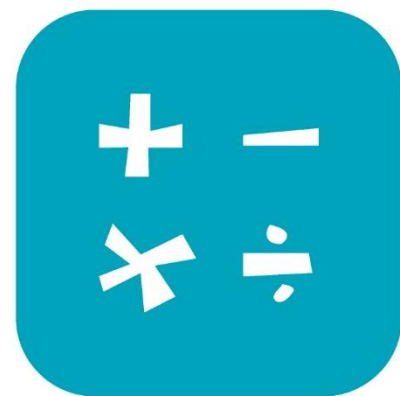
Pattern: Multiply by 2

e) 8, 40, 200, 1000, \_\_\_\_\_, \_\_\_\_\_, ...

Pattern: Multiply by 5

f) 15, 25, 35, 45, \_\_\_\_\_, \_\_\_\_\_, ...

Pattern: Add 10



**Try some calculations using the calculator on your mobile phone.**



## B. MIXED OPERATIONS

1. Use your calculator to work out the missing number in each of these questions.

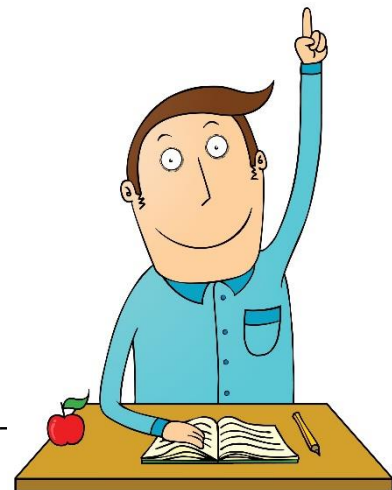
- a)  $345 + \underline{\hspace{2cm}} = 839$
- b)  $3824 - \underline{\hspace{2cm}} = 392$
- c)  $\underline{\hspace{2cm}} + 4738 = 8594$
- d)  $334 + 392 + \underline{\hspace{2cm}} = 1294$
- e)  $56 \times \underline{\hspace{2cm}} = 168$
- f)  $68 \times \underline{\hspace{2cm}} = 6392$
- g)  $2275 \div \underline{\hspace{2cm}} = 35$
- h)  $369 \div \underline{\hspace{2cm}} = 92.25$
- i)  $3849 + \underline{\hspace{2cm}} = 2934 + 4942$
- j)  $56 \times \underline{\hspace{2cm}} = 3285 + 1587$



**Remember to always clear the display before you start a new calculation.**

2. Solve these questions using your calculator. Compare your answers with a classmate.

- a)  $79 + 35 = \underline{\hspace{2cm}}$
- b)  $39 - 23 = \underline{\hspace{2cm}}$
- c)  $4953 + 3958 = \underline{\hspace{2cm}}$
- d)  $3728 - 1946 = \underline{\hspace{2cm}}$
- e)  $7 \times 6 = \underline{\hspace{2cm}}$
- f)  $39 \times 37 = \underline{\hspace{2cm}}$
- g)  $4839 + 29384 + 3949 = \underline{\hspace{2cm}}$
- h)  $29384 - 393 - 484 = \underline{\hspace{2cm}}$
- i)  $8 \times 3 \times 9 = \underline{\hspace{2cm}}$
- j)  $493 \times 39 = \underline{\hspace{2cm}}$



3. Use your calculator to...

a) Add 483 and 394

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b) Subtract 394 from 942

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c) Multiply 46 by 83

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d) Find the difference between 38457 and 28495

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e) Find the total of 34, 59, 82, 39 and 76

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f) Find the product of 24, 59 and 39

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g) Find how many groups of 95 there are in 8,075

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h) Find the difference between  $48 \times 39$  and  $78 \times 14$

---

i) Find a third of 138

---

j) Multiply 8 by 24, subtract 123 and then add 394

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k) Find the total of 23.5, 29.34, 0.38 and 17.29

---

l) Find the difference between 483.24 and 293.49

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m) Find half of 1,264.8

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n) Work out  $35.6 \times 3$

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o) Work out  $8.4 \times 9.2$

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4. Calculator (or mental maths) race!

Each person must fill in the answers, using calculators when necessary. The teacher will time you!

a)  $10 \times 3 =$  \_\_\_\_\_

n)  $9 \times 10 =$  \_\_\_\_\_

b)  $80 \div 8 =$  \_\_\_\_\_

o)  $80 \div 8 =$  \_\_\_\_\_

c)  $72 \div 8 =$  \_\_\_\_\_

p)  $21 \div 3 =$  \_\_\_\_\_

d)  $3 \times 8 =$  \_\_\_\_\_

q)  $3 \times 4 =$  \_\_\_\_\_

e)  $8 \times 8 =$  \_\_\_\_\_

r)  $100 \div 10 =$  \_\_\_\_\_

f)  $8 \div 8 =$  \_\_\_\_\_

s)  $6 \times 7 =$  \_\_\_\_\_

g)  $90 \div 10 =$  \_\_\_\_\_

t)  $1 \times 6 =$  \_\_\_\_\_

h)  $21 \div 3 =$  \_\_\_\_\_

u)  $9 \times 6 =$  \_\_\_\_\_

i)  $8 \times 2 =$  \_\_\_\_\_

v)  $6 \div 3 =$  \_\_\_\_\_

j)  $2 \times 10 =$  \_\_\_\_\_

w)  $9 \div 3 =$  \_\_\_\_\_

k)  $42 \div 7 =$  \_\_\_\_\_

x)  $50 \div 5 =$  \_\_\_\_\_

l)  $18 \div 6 =$  \_\_\_\_\_

y)  $10 \times 9 =$  \_\_\_\_\_

m)  $25 \div 5 =$  \_\_\_\_\_

z)  $35 \div 7 =$  \_\_\_\_\_



What was your time? \_\_\_\_\_

5. Estimate and then use your calculator. Write the number sentences and answers!

a) You ordered 7 dozen rolls for the party. How many rolls did you order?

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b) Pam spent 4400 cents on a gift for her friend's birthday. How many euro did she spend?



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c) At the party, 26 desserts had been eaten. There were 18 left. How many desserts were there to start with?

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d) The hotel quoted €960 for a birthday dinner party for 30 guests. How much did they charge per person?

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e) Four friends each spent €35.00 on gifts for their friend. How much did they spend altogether?

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f) At the barbecue, James made 26 cheeseburgers and 18 bacon burgers. How many burgers did James make?

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g) There were 60 balloons – a dozen in each packet. How many packets were there?

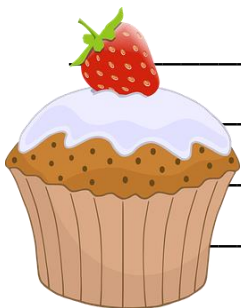
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h) There were 40 cupcakes on the table. 17 cupcakes had been eaten – are there still enough cupcakes for 25 people?



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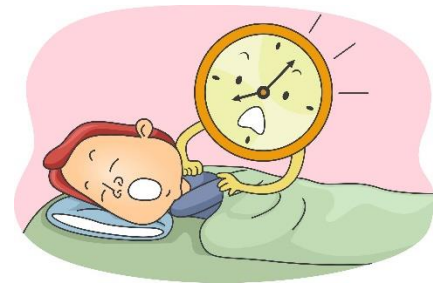
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6. Estimate and then use your calculator. Where necessary, write the number sentences and answers!



a) Answer the questions about time:

- One hour has \_\_\_\_\_ minutes.
- How many minutes are in 12 hours? \_\_\_\_\_
- How many minutes are in 24 hours? \_\_\_\_\_
- One hour has \_\_\_\_\_ minutes, and one minute has \_\_\_\_\_ seconds.
- How many seconds are there in one hour? \_\_\_\_\_
- There are \_\_\_\_\_ weeks in a year.
- How many weeks are there in 3 years? \_\_\_\_\_
- How many hours are there in 120 minutes? \_\_\_\_\_
- There are \_\_\_\_\_ days in a week.
- How many days are there in 6 weeks? \_\_\_\_\_
- There are \_\_\_\_\_ days in a year.
- How many days are there in 5 years? \_\_\_\_\_

b) Peter earns €30 per hour.

- How much will he earn in an 8-hour workday?

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- How much will he earn in a 40-hour workweek?

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- Every week, Peter pays 25% of his salary on rent. How much does he spend on rent?

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- At work, Peter gets 1,800 seconds for lunch. How many minutes is this?

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- There are three 8-hour work shifts every day at Peter's work. For how many hours is his workplace open every day?

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c) A fitness centre has a swimming pool, sauna and gym. There are 3,815 members in the fitness centre. There are two kinds of membership: regular and VIP. Each regular member pays €40 per month and each VIP member pays €600 per annum.

- There are 2,989 regular members. How many VIP members are there?

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- How much membership fees does the fitness centre receive from the VIP members each month?

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- How much less does a regular member pay than a VIP member over a year for the membership?

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- For every 20 people using the pool, there must be one lifeguard. How many lifeguards should be on duty if 60 people are swimming?

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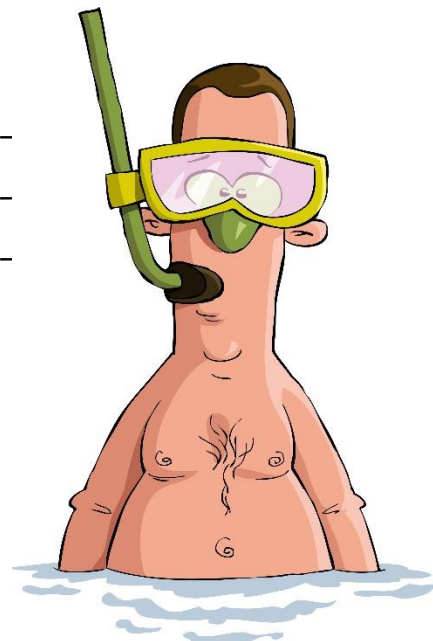
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- A lifeguard on duty gets a 20-minute break every 2 hours. How much breaktime does the lifeguard get during an 8-hour shift? Write the answer in hours and minutes.

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d) There are 344 boxes in the warehouse.

- Another 29 boxes have been delivered. How many are there altogether?

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- If each of the boxes holds 45 packets of flour, how many packets of flour are there in the warehouse?



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- A customer orders seven boxes. How many will be left in the warehouse?

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- If each box costs €52.00, how will a customer pay for 10 boxes?



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- A customer orders boxes worth €780.00. How many boxes did they order?

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7. Choose 10 items from the shopping list. Tick them. Add up how much the 10 items will cost. Use the calculator on your mobile phone.

**Shopping list**

- Bananas €1.89
- Lettuce €1.69
- Cherry tomatoes €1.35
- Packet of baby spinach €1.50
- Cucumber 79c
- 1 litre of milk €1.15
- 6 free-range eggs €2.20
- Round steak mince (1 kg) €5.00
- Packet of tea (80 teabags) €5.19
- Orange juice (1 litre, freshly squeezed) €2.75
- Tin of baked beans (415 g) €1.55
- Loaf whole-wheat bread €2.20
- Chia seeds (400 g) €7.99
- Black bin bags (10) €1.99




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8. Now, go and price the same items in a shop or supermarket near you. Use the calculator on your mobile phone to add up the items while you are in the shop.

How much was the total at your shop?

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9. What is the difference between the two prices?

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## APPENDIX I: MULTIPLICATION TABLE

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# MULTIPLICATION TABLE

<b>1</b>	2	3	4	5	6	7	8	9	10
2	<b>4</b>	6	8	10	12	14	16	18	20
3	6	<b>9</b>	12	15	18	21	24	27	30
4	8	12	<b>16</b>	20	24	28	32	36	40
5	10	15	20	<b>25</b>	30	35	40	45	50
6	12	18	24	30	<b>36</b>	42	48	54	60
7	14	21	28	35	42	<b>49</b>	56	63	70
8	16	24	32	40	48	56	<b>64</b>	72	80
9	18	27	36	45	54	63	72	<b>81</b>	90
10	20	30	40	50	60	70	80	90	<b>100</b>



## APPENDIX 2: DIVISION FACTS

# DIVISION FACTS

<p><b>÷ BY 1</b></p> $1 \div 1 = 1$ $2 \div 1 = 2$ $3 \div 1 = 3$ $4 \div 1 = 4$ $5 \div 1 = 5$ $6 \div 1 = 6$ $7 \div 1 = 7$ $8 \div 1 = 8$ $9 \div 1 = 9$ $10 \div 1 = 10$ $11 \div 1 = 11$ $12 \div 1 = 12$	<p><b>÷ BY 2</b></p> $2 \div 2 = 1$ $4 \div 2 = 2$ $6 \div 2 = 3$ $8 \div 2 = 4$ $10 \div 2 = 5$ $12 \div 2 = 6$ $14 \div 2 = 7$ $16 \div 2 = 8$ $18 \div 2 = 9$ $20 \div 2 = 10$ $22 \div 2 = 11$ $24 \div 2 = 12$	<p><b>÷ BY 3</b></p> $3 \div 3 = 1$ $6 \div 3 = 2$ $9 \div 3 = 3$ $12 \div 3 = 4$ $15 \div 3 = 5$ $18 \div 3 = 6$ $21 \div 3 = 7$ $24 \div 3 = 8$ $27 \div 3 = 9$ $30 \div 3 = 10$ $33 \div 3 = 11$ $36 \div 3 = 12$	<p><b>÷ BY 4</b></p> $4 \div 4 = 1$ $8 \div 4 = 2$ $12 \div 4 = 3$ $16 \div 4 = 4$ $20 \div 4 = 5$ $24 \div 4 = 6$ $28 \div 4 = 7$ $32 \div 4 = 8$ $36 \div 4 = 9$ $40 \div 4 = 10$ $44 \div 4 = 11$ $48 \div 4 = 12$
<p><b>÷ BY 5</b></p> $5 \div 5 = 1$ $10 \div 5 = 2$ $15 \div 5 = 3$ $20 \div 5 = 4$ $25 \div 5 = 5$ $30 \div 5 = 6$ $35 \div 5 = 7$ $40 \div 5 = 8$ $45 \div 5 = 9$ $50 \div 5 = 10$ $55 \div 5 = 11$ $60 \div 5 = 12$	<p><b>÷ BY 6</b></p> $6 \div 6 = 1$ $12 \div 6 = 2$ $18 \div 6 = 3$ $24 \div 6 = 4$ $30 \div 6 = 5$ $36 \div 6 = 6$ $42 \div 6 = 7$ $48 \div 6 = 8$ $54 \div 6 = 9$ $60 \div 6 = 10$ $66 \div 6 = 11$ $72 \div 6 = 12$	<p><b>÷ BY 7</b></p> $7 \div 7 = 1$ $14 \div 7 = 2$ $21 \div 7 = 3$ $28 \div 7 = 4$ $35 \div 7 = 5$ $42 \div 7 = 6$ $49 \div 7 = 7$ $56 \div 7 = 8$ $63 \div 7 = 9$ $70 \div 7 = 10$ $77 \div 7 = 11$ $84 \div 7 = 12$	<p><b>÷ BY 8</b></p> $8 \div 8 = 1$ $16 \div 8 = 2$ $24 \div 8 = 3$ $32 \div 8 = 4$ $40 \div 8 = 5$ $48 \div 8 = 6$ $56 \div 8 = 7$ $64 \div 8 = 8$ $72 \div 8 = 9$ $80 \div 8 = 10$ $88 \div 8 = 11$ $96 \div 8 = 12$
<p><b>÷ BY 9</b></p> $9 \div 9 = 1$ $18 \div 9 = 2$ $27 \div 9 = 3$ $36 \div 9 = 4$ $45 \div 9 = 5$ $54 \div 9 = 6$ $63 \div 9 = 7$ $72 \div 9 = 8$ $81 \div 9 = 9$ $90 \div 9 = 10$ $99 \div 9 = 11$ $108 \div 9 = 12$	<p><b>÷ BY 10</b></p> $10 \div 10 = 1$ $20 \div 10 = 2$ $30 \div 10 = 3$ $40 \div 10 = 4$ $50 \div 10 = 5$ $60 \div 10 = 6$ $70 \div 10 = 7$ $80 \div 10 = 8$ $90 \div 10 = 9$ $100 \div 10 = 10$ $110 \div 10 = 11$ $120 \div 10 = 12$	<p><b>÷ BY 11</b></p> $11 \div 11 = 1$ $22 \div 11 = 2$ $33 \div 11 = 3$ $44 \div 11 = 4$ $55 \div 11 = 5$ $66 \div 11 = 6$ $77 \div 11 = 7$ $88 \div 11 = 8$ $99 \div 11 = 9$ $110 \div 11 = 10$ $121 \div 11 = 11$ $132 \div 11 = 12$	<p><b>÷ BY 12</b></p> $12 \div 12 = 1$ $24 \div 12 = 2$ $36 \div 12 = 3$ $48 \div 12 = 4$ $60 \div 12 = 5$ $72 \div 12 = 6$ $84 \div 12 = 7$ $96 \div 12 = 8$ $108 \div 12 = 9$ $120 \div 12 = 10$ $132 \div 12 = 11$ $144 \div 12 = 12$

# APPENDIX 3: ADDITION FACTS

$1 + 0 = 1$	$2 + 0 = 2$	$3 + 0 = 3$	$4 + 0 = 4$	$5 + 0 = 5$	$6 + 0 = 6$
$1 + 1 = 2$	$2 + 1 = 3$	$3 + 1 = 4$	$4 + 1 = 5$	$5 + 1 = 6$	$6 + 1 = 7$
$1 + 2 = 3$	$2 + 2 = 4$	$3 + 2 = 5$	$4 + 2 = 6$	$5 + 2 = 7$	$6 + 2 = 8$
$1 + 3 = 4$	$2 + 3 = 5$	$3 + 3 = 6$	$4 + 3 = 7$	$5 + 3 = 8$	$6 + 3 = 9$
$1 + 4 = 5$	$2 + 4 = 6$	$3 + 4 = 7$	$4 + 4 = 8$	$5 + 4 = 9$	$6 + 4 = 10$
$1 + 5 = 6$	$2 + 5 = 7$	$3 + 5 = 8$	$4 + 5 = 9$	$5 + 5 = 10$	$6 + 5 = 11$
$1 + 6 = 7$	$2 + 6 = 8$	$3 + 6 = 9$	$4 + 6 = 10$	$5 + 6 = 11$	$6 + 6 = 12$
$1 + 7 = 8$	$2 + 7 = 9$	$3 + 7 = 10$	$4 + 7 = 11$	$5 + 7 = 12$	$6 + 7 = 13$
$1 + 8 = 9$	$2 + 8 = 10$	$3 + 8 = 11$	$4 + 8 = 12$	$5 + 8 = 13$	$6 + 8 = 14$
$1 + 9 = 10$	$2 + 9 = 11$	$3 + 9 = 12$	$4 + 9 = 13$	$5 + 9 = 14$	$6 + 9 = 15$
$1 + 10 = 11$	$2 + 10 = 12$	$3 + 10 = 13$	$4 + 10 = 14$	$5 + 10 = 15$	$6 + 10 = 16$
$1 + 11 = 12$	$2 + 11 = 13$	$3 + 11 = 14$	$4 + 11 = 15$	$5 + 11 = 16$	$6 + 11 = 17$
$1 + 12 = 13$	$2 + 12 = 14$	$3 + 12 = 15$	$4 + 12 = 16$	$5 + 12 = 17$	$6 + 12 = 18$

$7 + 0 = 7$	$8 + 0 = 8$	$9 + 0 = 9$	$10 + 0 = 10$	$11 + 0 = 11$	$12 + 0 = 12$
$7 + 1 = 8$	$8 + 1 = 9$	$9 + 1 = 10$	$10 + 1 = 11$	$11 + 1 = 12$	$12 + 1 = 13$
$7 + 2 = 9$	$8 + 2 = 10$	$9 + 2 = 11$	$10 + 2 = 12$	$11 + 2 = 13$	$12 + 2 = 14$
$7 + 3 = 10$	$8 + 3 = 11$	$9 + 3 = 12$	$10 + 3 = 13$	$11 + 3 = 14$	$12 + 3 = 15$
$7 + 4 = 11$	$8 + 4 = 12$	$9 + 4 = 13$	$10 + 4 = 14$	$11 + 4 = 15$	$12 + 4 = 16$
$7 + 5 = 12$	$8 + 5 = 13$	$9 + 5 = 14$	$10 + 5 = 15$	$11 + 5 = 16$	$12 + 5 = 17$
$7 + 6 = 13$	$8 + 6 = 14$	$9 + 6 = 15$	$10 + 6 = 16$	$11 + 6 = 17$	$12 + 6 = 18$
$7 + 7 = 14$	$8 + 7 = 15$	$9 + 7 = 16$	$10 + 7 = 17$	$11 + 7 = 18$	$12 + 7 = 19$
$7 + 8 = 15$	$8 + 8 = 16$	$9 + 8 = 17$	$10 + 8 = 18$	$11 + 8 = 19$	$12 + 8 = 20$
$7 + 9 = 16$	$8 + 9 = 17$	$9 + 9 = 18$	$10 + 9 = 19$	$11 + 9 = 20$	$12 + 9 = 21$
$7 + 10 = 17$	$8 + 10 = 18$	$9 + 10 = 19$	$10 + 10 = 20$	$11 + 10 = 21$	$12 + 10 = 22$
$7 + 11 = 18$	$8 + 11 = 19$	$9 + 11 = 20$	$10 + 11 = 21$	$11 + 11 = 22$	$12 + 11 = 23$
$7 + 12 = 19$	$8 + 12 = 20$	$9 + 12 = 21$	$10 + 12 = 22$	$11 + 12 = 23$	$12 + 12 = 24$

## MAPPING OF LEARNING OUTCOMES

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1. Find digits 0–9 and the decimal point and necessary operations buttons (+, −, ÷, =) on a calculator Pages 6 to 7 (using a calculator), Pages 8 to 13 (calculator keys), Pages 14 to 16 (the calculator display), Pages 17 to 18 (‘writing’ with the calculator), Pages 20 to 23 (vocabulary necessary for solving problems in maths)
2. Use a calculator to solve simple problems, e.g. add two items Pages 33 to 43 (addition on the calculator), Pages 44 to 50 (subtraction on the calculator), Pages 51 to 62 (multiplication on the calculator), Pages 63 to 75 (division on your calculator), Pages 77 to 89 (decimals), Pages 90 to 94 (fractions), Pages 95 to 98 (percentages), Pages 100 to 101 (patterns in numbers), Pages 102 to 110 (mixed operations)
3. Use a calculator to correct work which has been completed without the use of a calculator Pages 25 to 28 (rounding up and down to estimate answer before using the calculator), Pages 29 to 31 (estimating to check the calculator’s answer), other numeracy worksheets (checking answers)
4. Find and use a calculator on a mobile phone to work out how much several items will cost in a shopping trip Page 111 (shopping with calculator on mobile phone), throughout the worksheets (using mobile phone’s calculator)