Functional Maths

Skills Check E3/L1

Name: _____

Date started: _____

The Four Rules of Number

+ - X ÷

Functional Maths Skills Check

You can use a calculator

Please show all your workings

Read each question and decide if you need to use

addition, subtraction, multiplication or division.

Dog show

1) At the dog show there is **one** steward for every 50 people.
   How many stewards would you need for 700 people?

   a) 15
   b) 14
   c) 12

2) The judge at the dog show is paid £8.30 an hour.
   She works 5 hours. How much will she get paid?

3) A programme of events costs £2.45
   A lady bought 5 programmes
   How much did she have to pay?

4) On a stall they are selling dog shampoo.

DOG SHAMPOO

Normal price £1.90

Buy 2 bottles and save 50p off the total cost.

A customer buys two bottles of shampoo on special offer.

How much do two bottles cost?

5) Another stall is selling dog treats.

Normal price

£2.99 a pack

Special offer

Buy **two packs** for £4.58

Someone buys two packs of treats.

How much cheaper is it to buy two packs on the special offer than two packs at the normal price?

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Music Festival

6) A person buys three adult tickets at £18.60 each and two children's tickets at £5.00 each.

How much does this cost in total?

7) The soundman gets paid £9.25 an hour. He works 14 hours.

How much is he paid?

8) The band hire three large tents and two medium tents for the weekend.

HIRE CHARGES FOR THE WEEKEND

Small Tent	£80.00
Medium tent	£120.00
Large Tent	£160.00

How much do they pay in total?

9) Four people hire a caravan for the weekend. It costs £180.00

They **share** the cost. How much do they each have to pay?

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Mixed questions

10) A man buys the following items:

- loaf of bread for 89p
- packet of cereal at £1.25
- pot of yoghurt for 50p
- pack of bacon at £3.99

How much do the items cost altogether?

11) A builder bought three fence panels for £84.66

How much does one fence panel cost?

12) A shop assistant gets paid £5.20 an hour

She worked: Monday 7.5 hours

Tuesday 4 hours

Thursday 6 hours

How much did she get paid?

13) A salesman says a car travels 296 miles on a full tank of fuel (8 gallons). How far will the car travel on 1 gallon of fuel?÷

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14) Chloe the café assistant earns £144.60.
If she spends £76.90 on accommodation and food,
how much does she have left?

15) A tiler buys tiles and adhesive .

Tile shop

1 box of tiles £12.98

Tile adhesive
(10 Litre tin)
£6.85

What does he pay for 4 boxes of tiles and 2 tins of adhesive?

16) Nicky buys a bottle of cough mixture costing £3.64
She pays with a twenty-pound note.
How much change does she get?

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Challenge questions

17) A bottle of cough medicine holds 150 ml.

Cough Medicine

Take **two 5ml** spoonfuls

three times a day

How many days will the bottle of medicine last?

18) The assistant in the chemist works Monday to Thursday.
She starts at 9am and finishes at 4pm each day.
She gets paid £6.80 an hour.
What does she get paid?

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19) Joe won £6 370 in a competition.

He stayed in London for 2 nights.

The cost of the hotel was £42 per night, food bills came to £127, and he spent £500 on celebrating.

Petrol one way cost £57 and he he has to drive back home.

a) How much did he spend altogether?

b) How much prize money does he have left?

20) These are the ingredients for making 1 omelette

- 1 table spoon of butter
- 2 eggs
- 15 ml milk
- 50g cheese

a) How much milk do you need to make 12 omelettes?

b) How much cheese would you need for 30 omelettes?

c) Eggs come in boxes of six. A chef has 5 boxes of eggs.
How many omelettes can he make?

Functional Maths Skills Check
Curriculum mapping

Functional Skills Mathematics mapping – coverage and range statements

This resource is ideal for underpinning several Functional Maths coverage and range statements – particularly at Entry Level 3 and Level 1. However, in Functional Maths **it is the process skills that are assessed**; these are key to successful Functional Maths teaching and learning and must be developed and stressed during teaching (see page 10).

Coverage and range statements provide an indication of the type of mathematical content candidates are expected to apply in functional contexts. Relevant content can also be drawn from equivalent National Curriculum levels and the Adult Numeracy standards.

✓✓ *indicates the main coverage and range skills covered in this resource, although these will vary with the student group and how the resource is used by the teacher.* ✓ *A single tick indicates less coverage.*

Entry Level 1

a) understand and use numbers with one significant figure in practical contexts
b) describe properties of size and measure, including length, width, height and weight, and make simple comparisons.
c) describe position
d) recognise and select coins and notes
e) recognise and name common 2D and 3D shapes
f) sort and classify objects practically using a single criterion

Entry Level 2

a) understand and use whole numbers with up to two significant figures ✓✓
b) understand and use addition/subtraction in practical situations
c) use doubling and halving in practical situations
d) recognise / use familiar measures, inc. time & money
e) recognise sequences of numbers, including odd and even numbers
f) use simple scales and measure to the nearest labelled division
g) know properties of simple 2D and 3D shapes
h) extract information from simple lists ✓

Entry Level 3

a) add and subtract using three-digit numbers ✓
b) solve practical problems involving multiplication and division by 2, 3, 4, 5 and 10 ✓✓
c) round to the nearest 10 or 100
d) understand and use simple fractions
e) understand, estimate, measure and compare length, capacity, weight and temperature
f) understand decimals to 2 decimal places in practical contexts ✓✓
g) recognise and describe number patterns
h) complete simple calculations involving money and measures ✓
i) recognise and name simple 2D and 3D shapes and their properties
j) use metric units in everyday situations ✓
k) extract, use and compare information from lists, tables, simple charts and simple graphs ✓

Level 1

a) Understand and use whole numbers and understand negative nos. in practical contexts ✓
b) Add, subtract, multiply and divide whole numbers using a range of strategies ✓
c) Understand and use equivalences between common fractions, decimals and percentages
d) Add and subtract decimals up to two decimal places ✓
e) Solve simple problems involving ratio, where one number is a multiple of the other ✓✓
f) Use simple formulae expressed in words for one- or two-step operations
g) Solve problems requiring calculation, with common measures, including money, time, length, weight, capacity and temperature ✓✓
h) Convert units of measure in the same system
i) Work out areas and perimeters in practical situations
j) Construct geometric diagrams, models and shapes
k) Extract and interpret information from tables, diagrams, charts and graphs
l) Collect and record discrete data and organise and represent information in different ways
m) Find mean and range
n) Use data to assess the likelihood

References

- Ofqual (2009), *Functional Skills criteria for Mathematics: Entry 1, Entry 2, Entry 3, level 1 and level 2.* http://www.ofqual.gov.uk/
- This resource also covers many **adult numeracy curriculum** elements. http://www.excellencegateway.org.uk/content/etf1075

For related resources and further curriculum links please visit the download page for this resource at www.skillsworkshop.org

Functional Maths Skills Check Curriculum mapping

General process skills (for all levels):	FUNCTIONAL MATHEMATICS PROCESS SKILLS & SKILL STANDARDS(SS)				Skillsworkshop tips ✓ Tip that works well with this resource. To develop this skill, encourage learners to:
	Entry 1 SS	Entry 2 SS	Entry 3 SS	Level 1 SS	
	Representing *Selecting the mathematics and information to model a situation*				**Represent**
■ Recognise that a situation has aspects that can be represented using mathematics ■ Make an initial model of a situation using suitable forms of representation ■ Decide on the methods, operations and tools, including ICT, to use in a situation ■ Select the mathematical information to use	- Understand simple mathematical information in familiar contexts and situations	- Understand simple practical problems in familiar contexts and situations - Select basic mathematics to obtain answers	- Understand practical problems in familiar contexts and situations - Begin to develop own strategies for solving simple problems - Select mathematics to obtain answers to simple given practical problems that are clear and routine	- Understand practical problems in familiar and unfamiliar contexts and situations, some of which are non-routine - Identify and obtain necessary information to tackle the problem - Select mathematics in an organised way to find solutions	■ Highlight information they need and/or cross out unneeded information / numbers / words. ✓ ■ Arrange or reorganise given or selected information as needed e.g. in a table, list or grid. ■ Show all their working out. *E.g. repeated addition used to work out number patterns, draw dots or lines to show repeating patterns, listing months/days in order.* ✓
	Analysing *Processing and using mathematics*				**Analyse**
■ Use appropriate mathematical procedures ■ Examine patterns and relationships ■ Change values and assumptions or adjust relationships to see the effects on answers in models ■ Find results and solutions	- Use mathematics to obtain answers to simple given practical problems that are clear and routine - Generate results that make sense for a specified task	- Use basic maths to obtain answers to simple given practical problems that are clear and routine - Generate results to a given level of accuracy - Use given checking procedures	- Apply mathematics to obtain answers to simple given practical problems that are clear and routine - Use simple checking procedures	- Apply mathematics in an organised way to find solutions to straightforward practical problems for different purposes - Use appropriate checking procedures at each stage	■ Check all their calculations or procedures and show proof that they have done so. *E.g. a simple tick in a different colour to show they have re-checked their answers .* ✓ ■ Investigate other options / situations. ■ Create new questions about given information and try them out on others. ✓ ■ Mark each other's work. ✓
	Interpreting *Interpreting and communicating the results of the analysis*				**Interpret**
■ Interpret results and solutions ■ Draw conclusions in light of situations ■ Consider the appropriateness and accuracy of results and conclusions ■ Choose appropriate language and forms of presentation to communicate results and solutions	- Provide solutions to simple given practical problems in familiar contexts and situations	- Describe solutions to simple given practical problems in familiar contexts and situations	- Interpret and communicate solutions to practical problems in familiar contexts and situations	- Interpret and communicate solutions to practical problems, drawing simple conclusions and giving explanations	■ Draw conclusions. ■ Discuss and justify their choice of method and their answer. ✓ ■ Explain their answers and conclusions to others – verbally ✓ and in writing.