Functional Skills

Mathematics

Entry Level 3

Edexcel, BTEC and LCCI qualifications

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Contents

Introduction

The Pearson Edexcel Functional Skills Qualification in Mathematics at Entry Level 3 is designed for use in schools, colleges and training providers. It is part of a suite of Functional Skills qualifications offered by Pearson. These sample assessment materials have been developed to support this qualification and will be used as the benchmark to develop the assessment students will take.

Assessment guidance

Assessment conditions

The completion of an assessment must be under supervised conditions. During the assessment, learners must be in direct sight of the supervisor at all times. Input from the supervisor such as clarification of requirements or reading the questions, is acceptable and must be noted on the Assessment Record Authentication Sheet. However, the supervisor must not provide answers to the assessment questions or lead the learner towards the answer(s).

Learners must be given a suitably quiet, undisturbed location in which to complete assessments.

The room normally used by learners can be used for assessment. There is no need to remove posters, displays or materials containing information relevant to what is being assessed. However, displays should not provide answers to the assessment questions.

Assessments can be scheduled across a maximum of three sessions. If an assessment is completed in more than one session, it is recommended that the first session be used for assessment of the non-calculator section (Section A) only, and the subsequent session(s) be used for the calculator section (Section B) only. Learners' materials must be collected at the end of each session. If a single section is completed in more than one session, learners' material relating to that section must be stored securely and handed back at the beginning of the next session. The assessment response must be collected and retained securely at the end of the assessment.

Learners with agreed particular requirements, in relation to their mode of learning or assessment, can have their usual support unless it compromises the outcome of the assessment. Those providing assistance should refer to the access regulations given on our website.

Learners can have access to:

- notes made during the assessment.

Learners must not have access to:

- a prepared response.

Time

Centres should allow 25 minutes for the non-calculator section (Section A) and 75 minutes for the calculator section (Section B).

Calculator and non-calculator sections

If both sections are completed in one session:
- the non-calculator section (Section A) should be completed first
- centres must allow the full time for the non-calculator section (Section A) for all learners before collecting the paper in and distributing the calculator section (Section B) and calculators
- there is no set break between the non-calculator and calculator sections; learners must be kept under supervision at all times while Section A responses are collected in and Section B papers are distributed.

Calculators must be:
- of a size suitable for use on the desk
- either battery or solar powered
- free of lids, cases and covers that include printed instructions or formulas.

Calculators must not:
- be designed or adapted to offer any of these facilities:
  - language translators
  - symbolic algebra manipulation
  - symbolic differentiation or integration
  - communication with other machines or the internet
  - be borrowed from another learner during an examination for any reason;*****
- have retrievable information stored in them, this includes:
  - databanks;
  - dictionaries;
  - mathematical formulas;
  - text.

*Advice: a supervisor may give a learner a replacement calculator.

Assessment marking

Tutors/assessors mark the test using the mark scheme provided.
Pearson will conduct an annual review of the management of Functional Skills delivery and externally verify the assessment outcomes.
Pearson will sample the assessment outcomes through standards verification.

Authentication

Learners' work must be authenticated by the centre. The work presented for assessment must be completed by the individual learner. An Assessment Record and Authentication Sheet must be completed for each learner.

Evidence

Evidence of the learner's responses may be:

- written answers to the questions

- answers dictated to a scribe (who may be the supervisor)

- video recording of the assessment

- audio recording of the assessment with clear commentary on what is being done or shown.

The purpose of this assessment is to assess a learner's ability to meet the Functional Skills Mathematics Standards at Entry Level 3.

Supervisors should be familiar with the content of the assessments before they administer the assessment.

Assessment of Functional Skills Mathematics at Entry Level 3

Learners should be offered the opportunity to attempt every question on each section.

Supervisors must sign and date the record of each learner's responses to this assessment.

Arrangements for special consideration should be in accordance with the procedures outlined by guidance on our website.

Marks must be awarded according to the mark scheme.

The total number of marks that can be awarded for this assessment is 36.

The pass mark for this assessment is **XX [*to be added following standard setting activity]**.

Adaptation

These assessments are designed to enable adaptation to meet local needs. Therefore, centres are permitted to adapt the following aspects of the assessment.

- Centres are permitted to adapt the context of the assessment to meet their learners' needs or interests.

- Centres are permitted to provide physical objects during the assessment to meet their learners' needs. Physical objects could include, for example, card shapes or plastic money which matches the values of money used in a paper. A learner could then select the appropriate shape (if the question requires this) or choose the correct coins to make a value (if the question requires this).

- The content statement assessed through each item of the assessment must be the same as in the Pearson assessment, in order to ensure coverage of the Functional Skills subject content.

- Adapted assessments must replicate the activity and outcome of each assessment item. Therefore, while context could be adapted to suit learner needs, the mathematical content e.g. the amounts or units must remain as it is in the assessment.

- Wording of the questions in the assessments must be as similar as possible to the Pearson assessment.

- If the context of the assessment is amended it must be noted on the Assessment Record and Authentication Sheet.

- Learners should be familiar with context-specific vocabulary before the assessment.

Any proposed adaptions must be agreed in advance with the Pearson Standards Verifier

Interpretation

Centres may interpret and paraphrase the questions, provided the supervisor does not assist the learner in reaching a solution. Supervisors cannot tell learners the meaning of any mathematical term included in the subject content as these terms are an integral part of the assessment and part of the skills the learner needs to demonstrate.

Assessment may take place through assessor mediation, and physical objects may be used. Supervisors may read the questions to the learner and note the learner's responses in the question paper.

Preparation for assessment

Supervisors should have read through the assessments before the assessment and should ensure that learners are prepared in terms of any vocabulary associated with the context of the assessments. For example, for these assessment materials:

flat, rent, bills, full shelves, full shelf, DVD, internet contract, cleaning liquid, bottle, (5th) floor, parking, phone, van, hire, water tap, (water) meter, temperature, kitchen, arrow, cupboard, table, bookshelf, window, TV, mirror, hang, picture, wall, weighs, labels, hook, curtains, energy, gas, going out, activities, cinema, party, shopping, dancing, gym

Where 'correct money format' is required, learners should show their answers in pounds and pence with decimal notation and the correct symbol, e.g. £28.50

Functional Skills Mathematics Entry 3
Assessment Record and Authentication Sheet

Please complete this sheet. Use a separate sheet for each learner.

Centre name:	**Learner name:**
Centre number:	**Candidate number:**

The learner must complete both sections of the assessment.
The completed assessment must be attached to this sheet.

Date(s) taken:		**Start/finish times**	
Section A (Non-calculator) Marks: /9	**Section B (Calculator) Marks:** /27		
The pass mark is **XX***. To pass at Entry Level 3 the learner must score at least **XX*** marks out of the available 36 across the two sections. **[*to be added following standard setting activity]**.		**Total mark achieved:** /36	
Please tick box if the learner has achieved Entry Level 3		☐	

Give details of any assistance provided to the learner during the assessment, including any additional time and reasons for splitting assessment over more than one session (if applicable).

Attach another page if you wish to make additional comments.

I confirm that this learner's work has been supervised according to the instructions provided, and that it is the learner's own work.

Supervisor name:	**Supervisor signature and date:**

I confirm that this is my own work.

Learner name:	**Learner signature and date:**

By signing the declaration, you agree to your work being used to support professional development, online support and training of both Centre Assessors and Pearson Standards Verifiers. If you have any concerns or queries please email us at functionalskills@pearson.com

Please tick if you do **not** want your work to be used by Pearson for training purposes. ☐

Sampling information (to complete if work is sampled)		
Internal Verifier name	**Signature**	**Date**
Pearson Standards Verifier name	**Signature**	**Date**

Pearson Edexcel Functional Skills – Entry 3

Section A – Non-calculator

Mathematics
**Sample Assessment Materials
for first teaching September 2019
Time: 25 minutes**

Candidate name	

Candidate signature	Date

You must have a

- black or blue ink pen
- pencil
- ruler
- rubber.

Instructions

- Answer every question.
- You can write or draw to show your answers.
- You must **not** use a calculator.

Information

- The total number of marks for this section is 9.

Advice

- Read each question carefully.
- Check your work at the end.
- Ask if you do not understand any words.

Turn over ▶

S65036A

Pearson

1 Lyn moves to a new flat.

These are the amounts she spends each month on rent and bills.

Rent	Bills
£679	£138

Calculate the total of these amounts.

(2)

Show your working and your answer in the box below.

£ _____

2 Lyn puts DVDs on shelves.

She has 236 DVDs.

Each full shelf has 28 DVDs.

How many full shelves of DVDs does Lyn have?

Show how many DVDs are left over.   (3)

Show your working and your answer in the box below.

_____ full shelves of DVDs

_____ DVDs left over

3 Lyn pays for an internet contract.

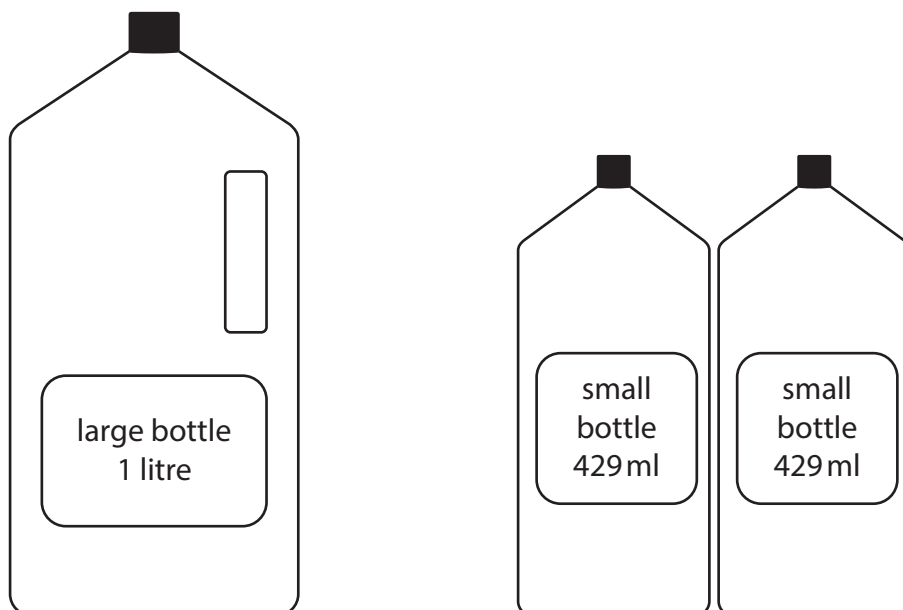> **Internet contract**
>
> £27 each month for 18 months

How much will Lyn pay in total for the internet contract? **(2)**

Show your working and your answer in the box below.

£ _____

4 Lyn wants to buy cleaning liquid for the flat.

She can choose 1 large bottle or 2 small bottles.

large bottle
1 litre

small
bottle
429 ml

small
bottle
429 ml

Does 1 large bottle have more liquid than 2 small bottles?

You must show your working.

(2)

Show your working and your answer in the box below.

Tick (✔) the correct answer.

Yes ( )   No ( )

Pearson Edexcel Functional Skills – Entry 3

Section B – Calculator

Mathematics

Sample Assessment Materials
for first teaching September 2019
Time: 75 minutes

Candidate name	

Candidate signature	Date

You must have a

- black or blue ink pen
- pencil
- ruler
- rubber
- calculator.

Instructions

- Answer every question.
- You can write or draw to show your answers.
- You may use a calculator.

Information

- The total number of marks for this section is 27.

Advice

- Read each question carefully.
- Check your work at the end.
- Ask if you do not understand any words.

Turn over ▶

Pearson

1 Riya and her friends want to rent a flat.

They want the flat to be lower than the 5th floor.

They want a flat that costs between £875 and £925 per month.

Riya finds information about flats to rent.

Which flat do they choose?   **(1)**

Tick (✔) the correct answer.

Flat A
6th floor
Rent £919

( )

Flat B
3rd floor
Rent £895

( )

Flat C
4th floor
Rent £935

( )

Flat D
2nd floor
Rent £867

( )

Flat E
7th floor
Rent £900

( )

Flat F
1st floor
Rent £870

( )

2   Riya and her friends want to rent a flat with parking.

In their town, 3 of the 15 flats have parking.

Which fraction is equal to $\frac{3}{15}$?   **(1)**

Tick (✔) the correct answer.

$\frac{3}{5}$	$\frac{15}{100}$	$\frac{1}{5}$	$\frac{1}{3}$
( )	( )	( )	( )

3 Riya wants to see a flat between 5:30 pm and 6 pm.

She chooses a time to see the flat.

When will Riya see the flat? **(1)**

Tick (✔) the correct answer.

16 : 40	15 : 40
( )	( )

17 : 40	05 : 40
( )	( )

18 : 40	06 : 40
( )	( )

4 Riya needs to hire a van to move into her new flat.

Cost of van hire for one day (£)					
Size of van	Mon	Tue	Wed	Thu	Fri
small	73	65	73	61	85
medium	80	74	80	72	92
large	85	81	85	79	99

Riya wants to move before Thursday.

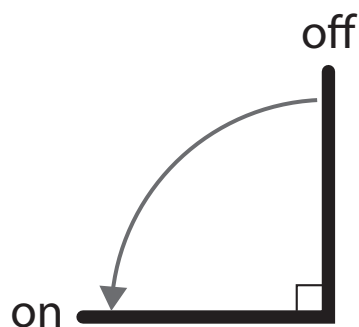She wants to hire the largest van she can.

She wants to pay less than £75

What is the cost of the van Riya hires? (1)

Show your answer in the box below.

£ _____

5 The diagram shows how to turn on the water tap in the flat.

off

on

Riya turns the tap on.

What fraction does she turn the tap? (1)

Show your answer in the box below.

6 A water meter shows how many units of water Riya and her friends use.

Riya reads the meter when they move in.

She reads the meter again after one month.

when they move in

| 789 units |

after one month

| 820 units |

How many units of water did the friends use in one month?

(2)

Show your working and your answer in the box below.

7 **(a) Round 789 to the nearest 10**
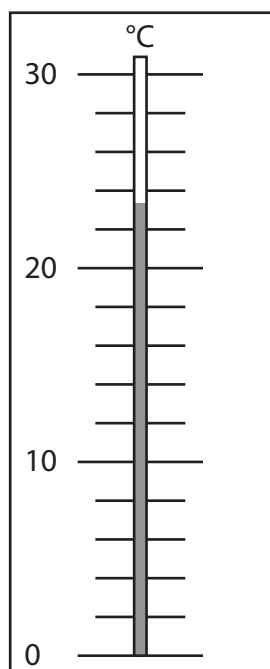
(1)

Show your answer in the box below.

(b) Use the rounded number to check your answer to Question 6

(1)

Show your check in the box below.

8 Riya looks at the temperature in the kitchen.

kitchen

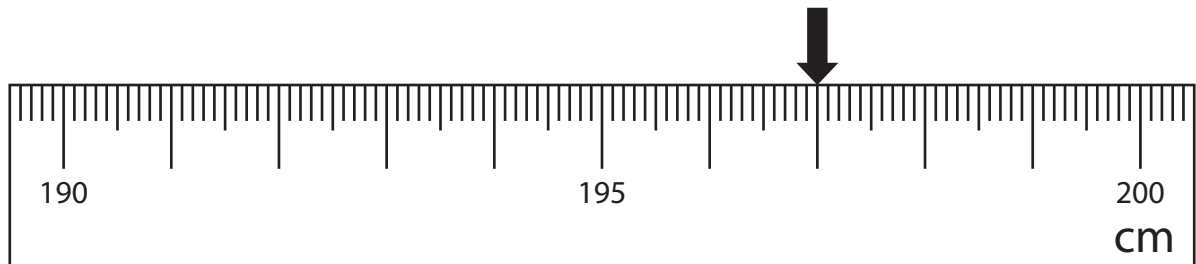**What is the temperature in the kitchen to the nearest division?**

(1)

Show your answer in the box below.

_____ °C

9 Riya wants to put a cupboard and a table in the living room.

The arrow on the scale shows the width of a space in the living room.

The width of the cupboard is 1 m.
The width of the table is 84 cm.

Will the cupboard and table fit in the space? **(3)**

Show why you think this.

Show your working and your answer in the box below.

Tick (✔) the correct answer.

Yes ( )   No ( )

10 Riya wants to buy a bookshelf to fit under a window.

The bottom of the window is 1.43 m from the floor.

Riya buys the tallest bookshelf that will fit.

Which bookshelf does Riya buy? (1)

Tick (✔) the correct answer.

Bookshelf heights

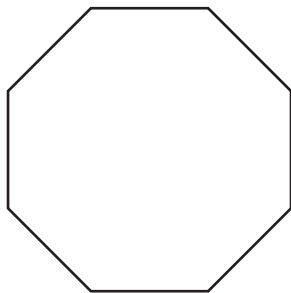|	
1.3 m	1.39 m
( )	( )
1.35 m	1.62 m
( )	( )
0.95 m	1.4 m
( )	( )

11 Riya wants to buy a mirror.

These are the shapes of some mirrors.

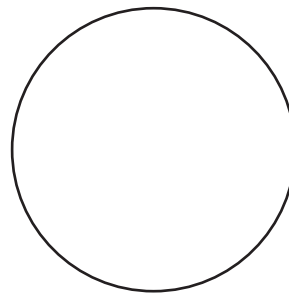**Which one of these shapes has only one line of symmetry?**
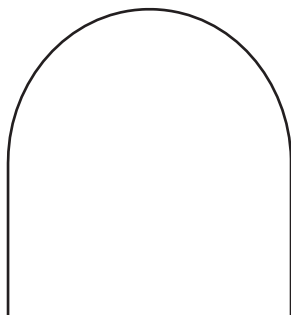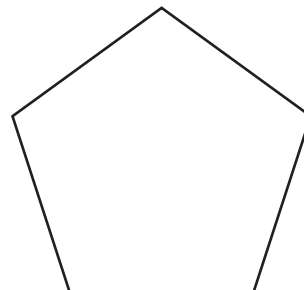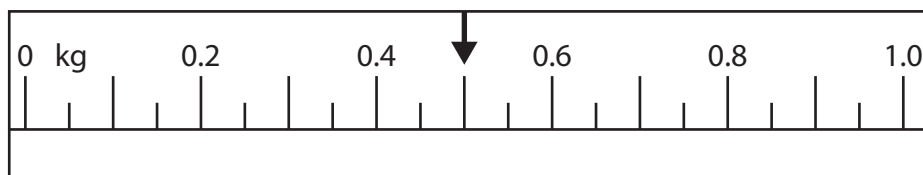
(1)

Tick (✔) the correct shape.

( )

( )

( )

( )

12 Riya needs a hook to hang a picture on a wall.

She weighs the picture.

The labels show the heaviest weight each hook can hold.

225 g	450 g	675 g	950 g
A	B	C	D

Riya buys the smallest hook that will hold the picture.

Which hook does Riya buy?

Show why you think this. (2)

Show your working and your answer in the box below.

13 Riya wants curtains in her room.

These are the lengths of curtains in metres.

    1.0 m   1.25 m   1.5 m

The lengths follow a pattern.

Riya wants the next length up from 1.5 m.

What length of curtains will Riya buy? **(1)**

Show your answer in the box below.

_____ m

14 Riya and her friends pay bills each month.

Type of bill: Energy
Date: 18th of the month
Amount: £55

Type of bill: Water
Date: 10th of the month
Amount: £19

Type of bill: Internet
Date: 21st of the month
Amount: £27

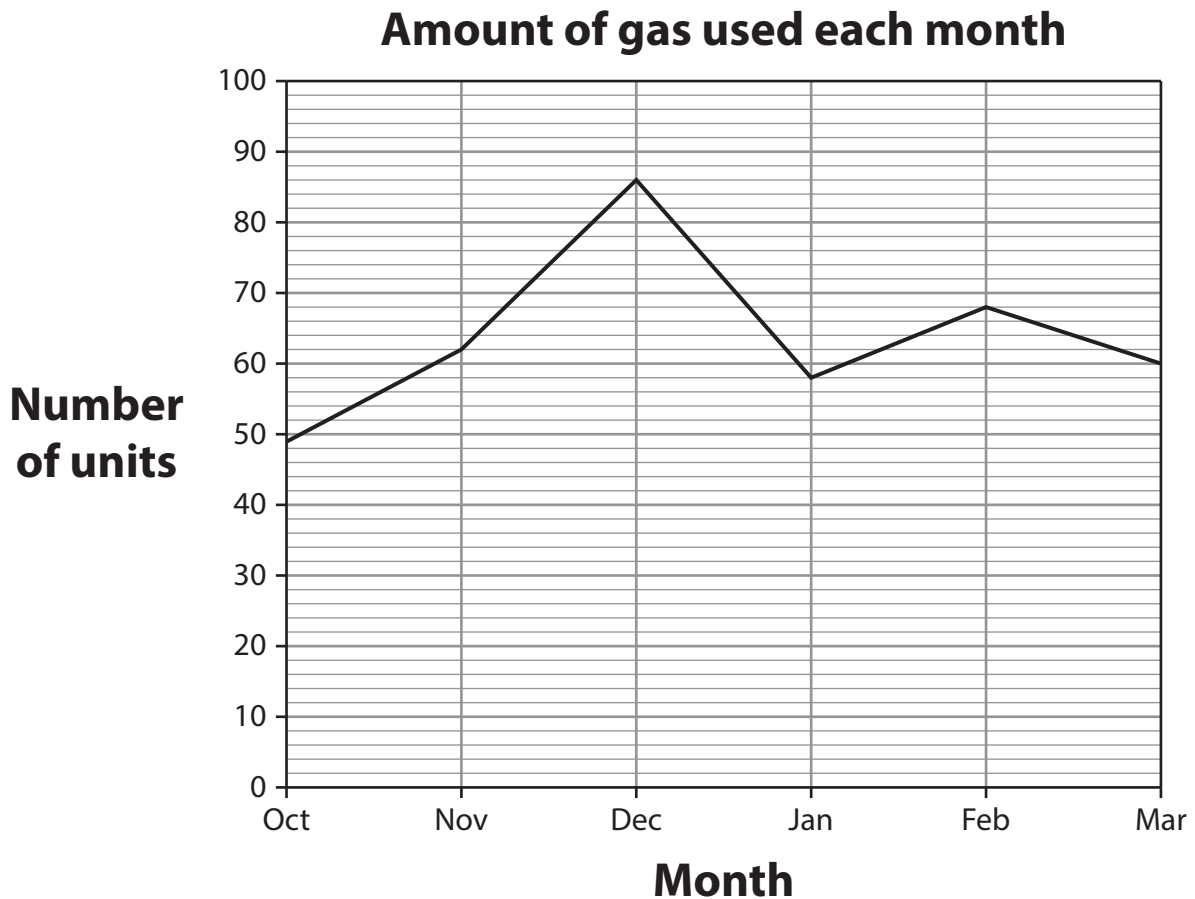Riya wants to show this information in a table.

Organise this information in a table. (1)

Show your answer in the box below.

15 Riya sees this graph on a gas bill.

Amount of gas used each month

Riya says the total amount of gas used in November and December was more than 150 units.

Is Riya correct?

Show why you think this.

(3)

Show your working and your answer in the box below.

Tick (✔) the correct answer.

Yes ( )   No ( )

16 Riya has a total of £60 to spend on food.

She spends £36.70

How much money does Riya have left to spend?

Use correct money format. **(3)**

Show your working and your answer in the box below.

17 Riya shows her monthly spending in a table.

Type of spending	Money spent
bills	£260
going out	£140
rent	£300

The chart shows the monthly spending.

Complete the chart and use correct labels.

(1)

Monthly spending

Type of spending
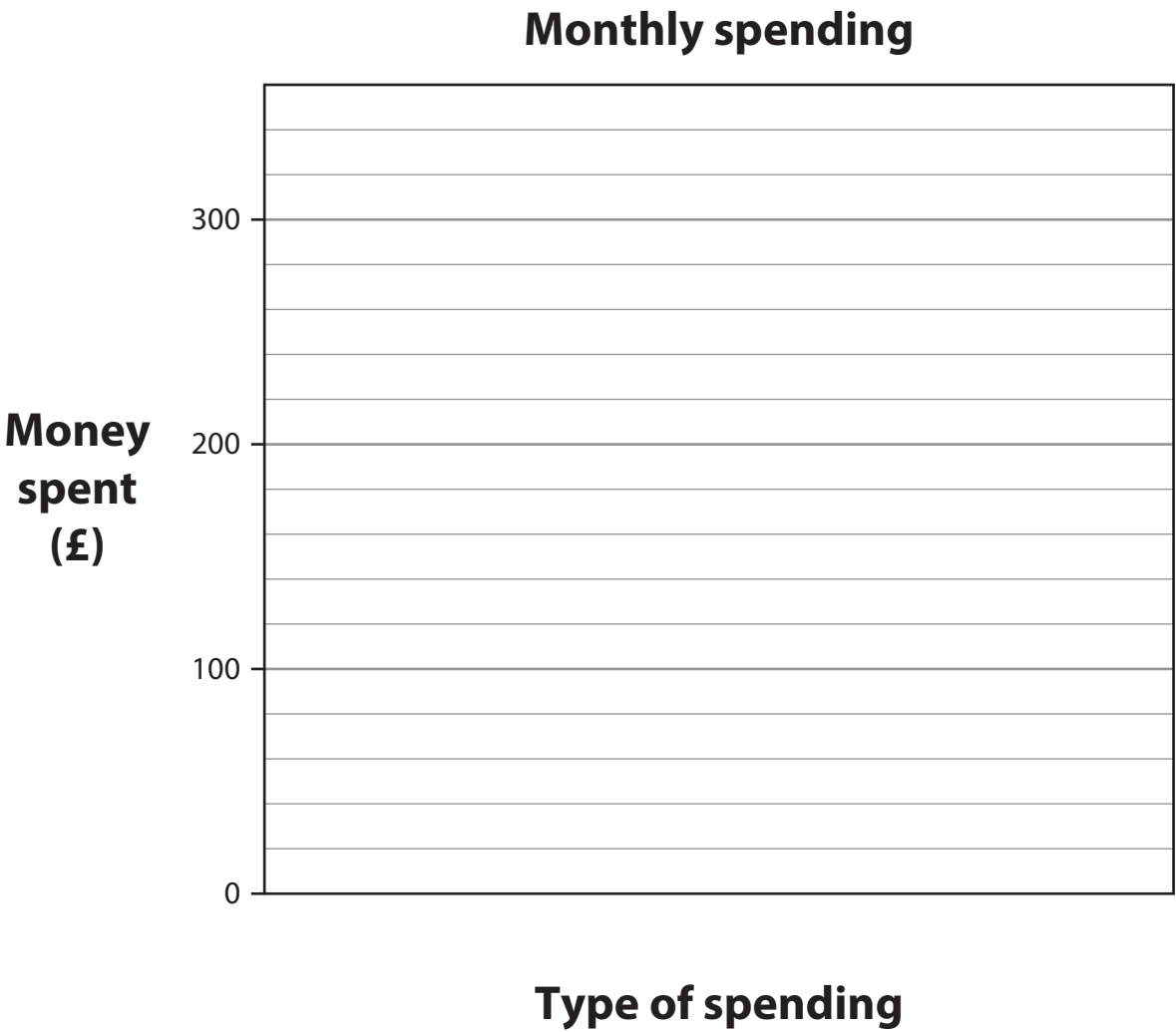
Riya counts the different activities she does each month.

These are the results.

cinema	party	shopping	dancing	cinema
gym	shopping	cinema	gym	dancing
dancing	dancing	gym	dancing	gym
party	gym	dancing	shopping	shopping

Complete the frequency table for the results. **(1)**

Frequency table	
Activity	**Frequency**
party	2
shopping	4
cinema	3
gym	
dancing	6

General guidance on the use of the mark scheme

1. Where the answer is a number, accept:

- figures
- words in any understandable spelling
- tallies where appropriate
- pictorial representations.

2. Where the mark scheme states 'indicates', accept any clear indication, for example:

- tick
- cross
- underline
- circling
- highlighting.

3. If the answer is clearly given, accept even if it is not in the answer box.

4. If the answer is in words, accept any understandable spelling.

5. Units can be ignored unless required explicitly by the mark scheme.

6. Information in brackets is optional, it is not required to award marks.

7. Mark crossed-out work, if it is legible and has not been replaced.

8. Where more than one response is indicated, award a mark only if all incorrect responses are crossed out.

9, 'Valid process' means any method that is complete and correct.

10. Where the mark scheme states '1 or' and '2' marks, see example below.

	Valid working, e.g. 350 + 150 (£)500	1 or 2	

Learner answer examples	Mark awarded	Explanation
500	2	No process shown, correct answer
350 + 150 = 500	2	Valid process and correct answer
350 + 100 = 500	2	Process not valid, correct answer
150 + 350	1	Valid process, no answer
350 + 150 = 600	1	Valid process, wrong answer
350 + 100 = 450	0	Process not valid, wrong answer

Mark scheme, Section A – Non-calculator

Question	Answer	Mark(s)	Content
1	Valid process to add 679 to 138 e.g. 679 + 138	1 or	E3.2
	817	2	E3.2
2	Valid process to find the number of full shelves e.g. 236 ÷ 28	1 or	E3.3
	8 (full shelves) OR 12 (DVDs left over)	2 or	E3.3
	8 (full shelves) AND 12 (DVDs left over) Accept only if 8 is clearly the number of full shelves and 12 is the remainder	3	E3.3
3	Valid process to find the total cost, e.g. 27 × 18	1 or	E3.4
	(£)486	2	E3.4
4	Valid process to compare capacities, e.g. 1000 − 429 OR 1000 ÷ 2 OR 429 + 429 AND 1000 (ml)	1 or	E3.17
	Yes AND 571 (ml) OR Yes AND 500 (ml) OR Yes AND 858 (ml) AND 1000 (ml) OR Yes AND 0.5 (litres) Accept equivalents in litres. Working must be shown in consistent units.	2	E3.17

Total marks for Section A: 9

Mark scheme, Section B – Calculator

Question	Answer	Mark(s)	Content
1	Indicates (Flat) B OR 3(rd floor) OR (£)895 and no other	1	E3.1
2	Indicates $\frac{1}{5}$ and no other fraction	1	E3.7
3	Indicates 17:40 and no other	1	E3.13
4	Indicates (£)74 and no other	1	E3.21
5	$\frac{1}{4}$ (turn) or equivalent fraction Accept in words, e.g. one quarter	1	E3.20
6	Valid process to find the difference, e.g. 820 – 789	1 or	E3.2
	31 (units)	2	E3.2
7a	790	1	E3.5
7b	Correct answer for the check, i.e. (820 − 790 =) 30 (790 + 31 =) 821 Award this mark for a correct answer based on an incorrect rounding of 789	1	E3.5
8	24 (°C) Exact answer required in figures or in words	1	E3.14

Question	Answer	Mark(s)	Content
9	Correct width i.e. 197 (cm)	1 or	E3.14
	OR		
	Valid process to compare the widths using incorrect value for width of the space, e.g. 196 – 100 OR 196 AND 100 + 84	2 or	E3.15
	Valid process to compare width of space and total width of cupboard and table, e.g. 197 − 100 OR 197 − 84 AND 100 OR 197 AND 100 + 84	3	E3.15
	Yes AND 97 (cm) OR Yes AND 113 (cm) AND 100 OR Yes AND 197 (cm) and 184 (cm) OR Yes AND 13 (cm difference)		
10	Indicates 1.4 (m) and no other	1	E3.8
11	Indicates correct shape and no other shape, i.e. Accept one line of symmetry drawn on the correct shape	1	E3.19
12	Indicates (hook) C only OR 675(g) only OR 0.5 (kg) OR 500 (g)	1 or	E3.14
	(Hook) C only AND 500 g OR (Hook) C only AND 0.5 (kg) AND 0.675 (kg) OR 675 (g) only AND 500 (g)	2	E3.16
13	1.75 (m)	1	E3.9

Question	Answer	Mark(s)	Content
14	Designs a table structure with suitable column headings, e.g. 'Type of bill', 'Date' and 'Amount (in £)' and correct values, e.g. | (Bills)		
---	---	---
Type of bill	Date	Amount
Energy	18(th)	£55
Water	10(th)	£19
Internet	21(st)	£27 | Data headings may be shown in a row or a column. Each data row/column must include correct values but may appear in any order as long as they correspond to the correct data headings. £ sign may be seen in data heading instead of with each amount. Accept table without borders.	1	E3.23
15	Correct values from chart, i.e. 62 AND 86 OR Valid process to make comparison using 1 correct value from chart, e.g. 150 − 62 − 83	1 or	E3.22
	Valid process to make comparison using both correct values from chart, e.g. 62 + 86 (= 148) 150 − 62 − 86 (= 2)	2 or	E3.22
	No AND 148 (units) OR No AND 2 (units less)	3	E3.22
16	Valid process to find the difference, e.g. 60(.00) − 36.7(0)	1 or	E3.10
	(£)23.3(0)	2	E3.10
	Correct £ symbol and money notation used i.e. two decimal places, not £23.30p	1	E3.10

Question	Answer	Mark(s)	Content
17	Draws correct bars with labels to show £300 for rent, £260 for bills, and £140 for going out, in any order Accept clear points or lines indicating the correct values	1	E3.23
18	5	1	E3.21

Total marks for Section B: 27

Total marks for assessment: 36