

Six Week Grade 4 Revision Programme

Teacher Guidance

This six-week revision programme has been designed to make use of Pearson's resources in a structured manner whilst supporting students by providing information about both their strengths and weaknesses.

The resources can be used as they are, or you may wish to adapt them for your specific context and students. We have included:

1. A student guidance document that includes a revision list and a handy weekly checklist to keep them on track throughout their revision.
2. Six weekly task booklets for students to work through that provide opportunities to practice fluency style questions and exam questions that are organised in a ramped manner to build success and confidence. These are available as questions with mark schemes or as two separate documents.
3. The teacher guidance also has a checklist to add some structure and organisation:
 - a. For some resit students you may have access to their ResultsPlus analysis from a previous exam sitting, however we have included links to our FE diagnostic tests to support you in deciding which topics to focus on over this short period of time.
 - b. A spreadsheet for scores to be collated that will provide you with performance statistics for some of the completed tasks. Used in addition with past papers you should be able to have a pretty solid idea of where each student is working at.
 - c. Links to our themed papers to enable you to use them to address areas that need improvement.

Before you start, there are a number of things that you may wish to do to make this run seamlessly, so we've also included a "Pre-Launch Checklist".

Pre-Launch checklist:

Get organised.

- You may wish to print off the initial student document or email directly to students. If emailing, spend some time getting your email list set up so that sending information and communicating with your group of students can be done swiftly. If emailing we have included some suggested text for you to copy and paste into the body of your email when sending out the weekly tasks.
- Print off:
 - This pack. Consider printing the overview onto A3 and sticking to your desk so it is always on hand.
 - A copy of the weekly task packs for your use (if printing off and handing tasks to students each week you will need to print enough of the week 1 task booklets)
 - Enough copies of two sets of past papers of your choosing and mark schemes for your students and label them Set 1 and 2 (if you want them to complete some bonus tasks too!)
- Save this and all the related documents somewhere obvious.
- Add your student names to the tracker for you to monitor progress over time.

We've tried to keep this as simple as possible so that's it!

Useful links:

[Mathematics Foundation Bootcamp workbook](#)

[Pearson BBC Bitesize Revision Guide](#)

[The Maths Emporium](#)

[Edexcel Online](#)

[ResultsPlus](#)

[ResultsPlus and Access to Scripts Online Network](#) – ResultsPlus information from 26:57

[FE Diagnostic Tests](#)

Breakdown of the resources used in the student pack and what you may want to use in the classroom over the six weeks.

Timeline	Maths emporium resources used in the student pack	Suggested Maths Emporium resources that teachers can use in lessons alongside the student pack
Week 1	One markers 1, 2 and 3 Achieving grade 1 – Set 2 P1 and P2	Instructions for ResultsPlus Diagnostic Tests - online This is to identify gaps in students' knowledge and the Topic tests are for students to work on filling the gaps.
Week 2	One markers 4, 5 and 6 Achieving grade 1 – Set 2 P3 Achieving grade 2 – Set 2 P1	Key topic papers These papers are compiled of the identified Key Topics from past papers.
Week 3	One markers 7, 8 and 9 Achieving grade 2 – Set 2 P2 and P3	Post-16 Boost themed papers Past exam questions with contexts changed to common post-16 areas of study, e.g. Construction.
Week 4	One markers 10, 11 and 12 Achieving grade 3 – Set 2 P1 and P2	Bronze Silver Gold papers AO3 problem solving questions for GCSE Mathematics (9-1) examinations. These have differentiated scaffolding for multi-step questions.
Week 5	One markers 13, 14, and 15 Achieving grade 3 – Set 2 P3 Aiming for grade 4 – Set 6 P1	Crossover papers Practice papers made up of the common crossover questions (appearing in both tiers) for each of the SAMs and specimen papers, with mark schemes.
Week 6	One markers 16 Aiming for grade 4 – Set 6 P2 and P3	Post-16 Reordered papers 1MA1 past papers where the questions have been re-ordered in descending mean performance score for Post-16 students only.

All 'Achieving a...' and 'Aiming for...' sets used in this revision programme use questions from Summer 2023 and November 2023 GCSE Maths exams. You may prefer to not use these past papers as your bonus tasks to avoid repeating questions.

[Shadow papers](#) are available for both of these sittings as an alternative to those past papers.

EVERY WEEK: -

(1) Tick off each task as you complete it, this will keep you organised.

(2) Check in with students to ascertain if there are specific topics that they each need help with, in addition to the needs of the whole group. Send them themed papers on those specific topics.

(3) Track progress and address any concerns about lack of effort early. Recognise hard work regularly.

Week 1	Week 2	Week 3
Diagnostic Test 1 / Results Plus Week 1 Tasks sent/ printed Collate scores: Week 1 Task 2 Week 1 Task 4 Topics to teach: Topic 1: Topic 2: Topic 3: Topic 4: Topic 5:	Diagnostic Test 2 / Results Plus Week 2 Tasks sent/ printed Collate scores: Week 2 Task 2 Week 2 Task 4 Topics to teach: Topic 1: Topic 2: Topic 3: Topic 4: Topic 5:	Diagnostic Test 3 / Results Plus Week 3 Tasks sent/ printed Collate scores: Week 3 Task 2 Week 3 Task 4 Topics to teach: Topic 1: Topic 2: Topic 3: Topic 4: Topic 5:
Week 4	Week 5	Week 6
Week 4 Tasks sent/ printed Collate scores: Week 4 Task 2 Week 4 Task 4 Topics to teach: Topic 1: Topic 2: Topic 3: Topic 4: Topic 5:	Week 5 Tasks sent/ printed Collate scores: Week 5 Task 2 Week 5 Task 4 Topics to teach: Topic 1: Topic 2: Topic 3: Topic 4: Topic 5:	Week 6 Tasks sent/ printed Collate scores: Week 6 Task 2 Week 6 Task 4 Topics to teach: Topic 1: Topic 2: Topic 3: Topic 4: Topic 5:

Teacher to student email template

Week 1

Dear students,

You have been enrolled on a 6-week revision programme to help boost your GCSE grade to a 4. The programme consists of 3-5 weekly activities with bonus tasks available to help support you refine your maths skills ready for your November re-sit. Please remember that completing the work on the programme is the minimum amount of independent work you need to complete to give yourself the best chance at achieving a grade 4 or above. The more practice you do, the more prepared you will be.

Week 2 - 6

Dear students,

You have been enrolled on a 6-week revision programme to help boost your GCSE grade to a 4. Well done for completing the Week 1 tasks, now it's time to move forward onto Week 2.

Please remember that completing the work on the programme is the minimum amount of independent work you need to complete to give yourself the best chance at achieving a grade 4 or above. The more practice you do, the more prepared you will be. Don't forget to complete the bonus task!

Six Week Grade 4 Revision Support

If you are reading this it is very likely that you are looking for some help in getting that grade 4. The six-week revision programme works by giving you lots of opportunities to work on exam questions and using the information to enable you to pinpoint topics that you need to improve. There is no quick fix, this will be hard work and there will be times when you will want to give up especially as you progress and come across topics that you may need to work harder with. All of this is normal but remember that anything that is worth having is worth working for.

That's enough of the niceties ... let's get on with it!

Preparation checklist:

Get organised.

- Make sure you have the correct equipment: Pen, pencil, ruler, rubber, protractor, pair of compasses, tracing paper and calculator. An exercise book (or folder and paper) and a [revision guide](#) / [workbook](#) of your choice.
- Print off (your teacher / tutor may agree to do this for you, or plan to send the weekly tasks to you on a weekly basis)
 - This pack,
 - the weekly task packs and
 - two sets of past papers and markschemes and label them Set 1 and 2 (if you want to complete the bonus tasks too!)
- Have a read through the revision checklist on the next two pages and “tick off” any topics that you are confident with.

Unit	Unit / Topic	RAG
1	Integers and place value Types of number Use and order positive and negative numbers Use inequality symbols Four operations using positive and negative numbers Round numbers to nearest 10, 100, 1000 and use rounding for estimation	
	Decimals Use decimals and place value Compare and order decimal numbers Four operations using decimal numbers Round to nearest whole number, decimal place & significant figures Use one calculation to check another	
	Indices, powers and roots Find squares and cubes Use index notation including negative powers Use laws of indices to multiply and divide numbers in index form Order of operations including powers and brackets Use of calculator	
	Factors, multiples and primes Identify factors, multiples and prime numbers Find prime factorisation of a number (& write in index form) Find common factors & highest common factor Find LCM of two (or three) numbers	
2	Algebra: the basics Write an expression Collect like terms Simplify expressions Use index laws	
	Expanding and factorising single brackets Expand single brackets Simplify expressions using squares and cubes Factorise expressions	
	Expressions and substitution into formulae Substitute into expressions involving brackets & powers Substitute into a formula (& word formula)	
	Tables Sort and classify data (inc tally charts) Extract data from lists and tables (inc time tables) Identify mode from a list / table	
3	Charts and graphs Know which chart or diagram to use for different data sets Draw and interpret bar charts (inc dual & composite) Draw and interpret line graphs (vertical & time-series) Draw and interpret frequency polygons Draw and interpret pictograms Draw and interpret stem and leaf diagrams	
	Pie charts Draw and use pie charts Find mode & total frequency from a pie chart Compare two pie charts	
	Scatter graphs Draw and use scatter graphs & lines of best fit Identify outliers & correlation	

Unit	Unit / Topic	RAG
4	Fractions Equivalent fractions including simplifying & comparing Express one amount as a fraction of another Convert between mixed numbers and improper fractions Four operations using fractions Find a fraction of an amount	
	Fractions, decimals and percentages Use fraction to decimal conversions Recognise terminating & recurring decimals	
	Percentages Convert between fractions, decimals & percentages Order & compare fractions, decimals & percentages Write one amount as a percentage of another Calculate percentage of an amount Calculate percentage increase/decrease Use decimals to find quantities (multiplier methods) Increase / decrease an amount by a percentage	
	Equations Use function machines Solve equations (inc brackets and unknowns on both sides) Rearrange simple equations Set up & solve equations to solve problems	
5	Inequalities On a number line Listing numbers that satisfy an inequality Solving inequalities and show the solution on a number line Error intervals due to rounding & truncation	
	Sequences Continue sequences inc from pictures Find the nth term Use nth term rule to generate or continue a sequence	
	Properties of shapes, parallel lines and angle facts Measure and draw lines, angles, 2D & 3D shapes Identify and name 2D shapes and their properties Identify parallel and perpendicular lines Use angle facts - around a point, straight line, vertically opposite etc Use angle properties of parallel lines	
	Interior and exterior angles of polygons Use sum of interior angles for irregular & regular polygons Use sum of exterior angles for regular polygons	
6	Statistics and sampling Understand bias	
	The averages Use various charts & diagrams in relation to averages Calculate the mean, mode, median and range from a list Median, mean and range from a table (discrete data)	
	Modal class, median and estimate of the mean from grouped data	
	Perimeter and area Convert between metric measures Read scales Time Perimeter of 2D shapes Area of 2 D shapes Area of compound shapes Surface area of prisms & simple compound forms	

Unit	Unit / Topic	RAG
8	3D forms and volume Identify and name 3D forms and their properties Volume of a cuboid Volume of a prism Volume of a composite forms Real-life graphs Use coordinates in all 4 quadrants Midpoints of a line segment Conversion graphs Fixed cost and cost per unit graphs Distance / time and Velocity/ time graphs Straight-line graphs Draw, use and interpret (inc gradient) straight line graphs Identify parallel lines Transformations I: translations, rotations & reflections Find the equation of a line (including from a graph) Transform and describe translations Transform and describe rotations Transform and describe reflections Transformations II: enlargements and combinations Transform and describe enlargements Transform shapes using a combination of transformations Describe transformations when using multiple transformations Ratio Write ratios in their simplest form (including in context) Share a quantity in a given ratio (including 3 part ratios) Use a ratio to find one quantity when another is known Compare ratios Write ratio in the form 1:n or n:1 Write a ratio as a fraction and vice versa Proportion Use direct & inverse proportion (and recognise graphically) Best value Recipes Currency conversions Right-angled triangles: Pythagoras and trigonometry Pythagoras' Theorem Trigonometry - sin, cos and tan Know exact trig values Probability I Probability scale Listing outcomes Two way tables Use 1-p Probability II Relative frequency Sample space diagrams Venn diagrams & set notation Probability tree diagrams Multiplicative reasoning Use compound measures: Pressure, Density & Speed Percentage profit / loss Reverse percentages Simple interest Compound interest & growth Depreciation & decay Rates of pay	
9		
10		
11		
12		
13		
14		

Unit	Unit / Topic	RAG
15	Plans and elevations 3D shape names and properties Sketch 3D forms Draw plans and elevations of shapes Draw a 3D form given its plan and elevations Constructions, loci and bearings Standard constructions Find regions satisfying a combination of loci Use maps and scale drawings Bearings Quadratic equations: expanding and factorising Expand double brackets Factorise quadratic expressions Solve quadratic equations Quadratic equations: graphs Plot quadratic graphs Find solutions, intercepts & turning points of a quadratic graph Circles, cylinders, cones and spheres Name parts of a circle Recall & use formula for area and circumference of a circle Arcs and sectors Surface area & volume of a cylinder Spheres, pyramids, cones and composite solids. Fractions and reciprocals 4 operations with mixed number fractions Reciprocal of an integer, decimal or fractions Indices and standard form Index laws to simplify & calculate the value of an expression Convert between ordinary numbers and standard form Work with the 4 operations in standard form Use a calculator with indices and standard form Similarity and congruence in 2D Use congruence criteria for triangles (SSS, SAS, ASA and RHS); Identify similar shapes Identify scale factors and find missing lengths in similar shapes Vectors Understand and use column notation including drawing them Identify parallel column vectors Calculate using column vectors Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations Know the terms equation, identity, expression etc Change the subject of a formula Answer simple "show that" questions. Use inverse proportion involving graphs Recognise and sketch cubic functions Recognise and sketch reciprocal functions Solve simultaneous equations algebraically and graphically	
16		
17		
18		
19		
20		

EVERY WEEK:-

- (1) Tick off each task as you complete it, making a note of your scores (and share with your tutor / teacher) .
- (2) Review the revision checklist and tick off additional topics that you are now confident with.
- (3) As you work through the task pack make a note of three to five topics that you need additional support with and use your revision guide or ask for help!

Week 1		Week 2		Week 3	
Tick when complete	Score	Tick when complete	Score	Tick when complete	Score
☐ Task 1		☐ Task 1		☐ Task 1	
☐ Task 2		☐ Task 2		☐ Task 2	
☐ Task 3		☐ Task 3		☐ Task 3	
☐ Task 4		☐ Task 4		☐ Task 4	
☐ Task 5		☐ Task 5		☐ Task 5	
<u>Past Paper Bonus Task:</u> How many marks can you get in 40 mins? Target topics: Topic 1: _____ Topic 2: _____ Topic 3: _____ Topic 4: _____ Topic 5: _____		<u>Past Paper Bonus Task:</u> How many marks can you get in 40 mins? Target topics: Topic 1: _____ Topic 2: _____ Topic 3: _____ Topic 4: _____ Topic 5: _____		<u>Past Paper Bonus Task:</u> How many marks can you get in 40 mins? Target topics: Topic 1: _____ Topic 2: _____ Topic 3: _____ Topic 4: _____ Topic 5: _____	
Week 4		Week 5		Week 6	
Tick when complete	Score	Tick when complete	Score	Tick when complete	Score
☐ Task 1		☐ Task 1		☐ Task 1	
☐ Task 2		☐ Task 2		☐ Task 2	
☐ Task 3		☐ Task 3		☐ Task 3	
☐ Task 4		☐ Task 4		☐ Task 4	
☐ Task 5		☐ Task 5		☐ Task 5	
<u>Past Paper Bonus Task:</u> How many marks can you get in 40 mins? Target topics: Topic 1: _____ Topic 2: _____ Topic 3: _____ Topic 4: _____ Topic 5: _____		<u>Past Paper Bonus Task:</u> How many marks can you get in 40 mins? Target topics: Topic 1: _____ Topic 2: _____ Topic 3: _____ Topic 4: _____ Topic 5: _____		<u>Past Paper Bonus Task:</u> How many marks can you get in 40 mins? Target topics: Topic 1: _____ Topic 2: _____ Topic 3: _____ Topic 4: _____ Topic 5: _____	

WEEK 1 TASKS

Remember to mark your work when completed. This is a crucial part of revision in maths. Make a note of any topics that you need additional support with and ask for help.

You may find it useful to revisit the same questions a week later and check that you can then answer questions that you were previously unsure about or could not answer.

Remember: you can do this!

WEEK 1 TASK 1

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Find the square root of 64

6

Here are four digits:

5 6 1 9

Write down the smallest possible two digit number that can be made with two of the digits

2

Write 7.26451 correct to 3 decimal places

7

Work out $120 - 89$

3

Simplify $7 \times e \times f \times 8$

8

Write down a multiple of 6 that is between 40 and 50

4

Write $\frac{4}{5}$ as a percentage

9

Write in order of size. Start with the smallest number

0.078 0.78 0.87 0.708

5

Write 20% as a fraction

10

Change 4560 g into kg



WEEK 1 TASK 2

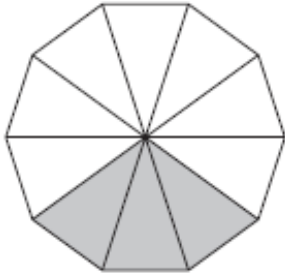
Estimated completion time = 30 minutes.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1 What fraction of this shape is shaded?



.....
(Total for Question 1 is 1 mark)

- 2 Write down **three** different factors of 20

..... , ,
(Total for Question 2 is 2 marks)

- 3 Miss Bailey asked 24 students where they each wanted to go on a school trip.

Here are the results.

museum	castle	castle	farm
farm	castle	farm	farm
castle	farm	castle	castle
castle	farm	castle	museum
museum	farm	castle	museum
museum	museum	castle	castle

- (a) Complete the frequency table.

Place	Tally	Frequency
castle		
farm		
museum		

(2)

- (b) Write down the place that is the mode.

..... (1)

(c) Draw a bar chart to show the results.



(3)

(Total for Question 3 is 6 marks)

- 4 Matt is drawing a scale diagram.
1 cm represents 5 m.
He draws a line 3 cm long.
What real distance does the line represent?

..... m
(Total for Question 4 is 1 mark)

5 Solve $p - 2 = 3$

$p =$
(Total for Question 5 is 1 mark)

6 Simplify $3 \times a \times 4$

.....
(Total for Question 6 is 1 mark)

7 Selina has a bag of 22 counters.
5 of the counters are blue.
9 of the counters are red.
8 of the counters are pink.
Selina takes at random a counter from the bag.

Write down the probability that Selina

(i) takes a red counter,

..... (1)

(ii) takes a white counter.

..... (1)
(Total for Question 7 is 2 marks)

8 A total of 700 tickets were on sale for a football match.
452 of the tickets were sold.
How many tickets were **not** sold?

.....
(Total for Question 8 is 2 marks)

9 Work out $120 - 89$

.....
(Total for Question 9 is 1 mark)

10 Write 38% as a decimal.

.....
(Total for Question 10 is 1 mark)

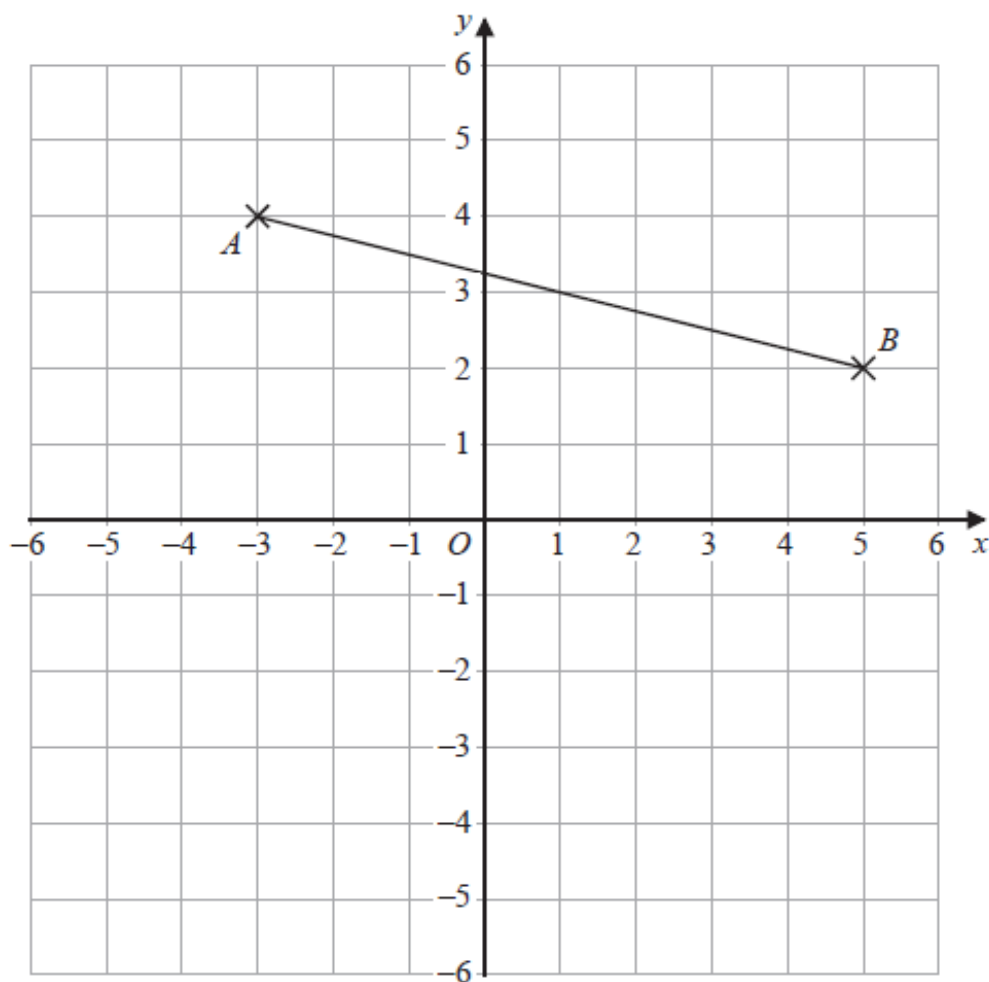
11 Here is a list of numbers.

1.6 1.4 2.1 0.5 1.3

From the list, write down the smallest number.

.....
(Total for Question 11 is 1 mark)

12



(a) Write down the coordinates of point B.

(..... ,) (1)

(b) Plot the point with coordinates (4, -2)
Label this point C.

(1)

(Total for Question 12 is 2 marks)

13 Last week, 73% of the tickets sold at a cinema were adult tickets.
What percentage of the tickets sold were **not** adult tickets?

.....%
(Total for Question 13 is 1 mark)

14 Work out $-9 + 5$

.....
(Total for Question 14 is 1 mark)

15 Here are the ingredients needed to make 20 peanut butter cookies.

Makes 20 cookies

250 g peanut butter

200 g sugar

2 small eggs

Derek wants to make 60 cookies.
He has 900 g of peanut butter.
Does Derek have enough peanut butter to make 60 cookies?
You must show how you get your answer.

(Total for Question 15 is 3 marks)

16 Here is the list of ingredients for making 20 biscuits.

Ingredients for 20 biscuits	
150 g	butter
100 g	sugar
250 g	flour

Harry wants to make 60 biscuits.
How much flour does Harry need?

..... g
(Total for Question 16 is 2 marks)

17 $P = 2g + 4h$
Work out the value of P when $g = 3$ and $h = 5$

$P =$
(Total for Question 17 is 2 marks)

TOTAL FOR PAPER IS 30 MARKS

WEEK 1 TASK 3

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Simplify $5p - 3p + p$

6

Write 3758 correct to the nearest 1000

2

Write 56.78 correct to 1 significant figure

7

Work out
 $20 - 1 \times 10$

3

Change 365 cm into metres

8

Write down the first even multiple of 7

4

Solve $\frac{y}{4} = 10$

9

Work out the value of 3^4

5

Write 35% as a fraction

10

In the space below,
draw a hexagon



WEEK 1 TASK 4

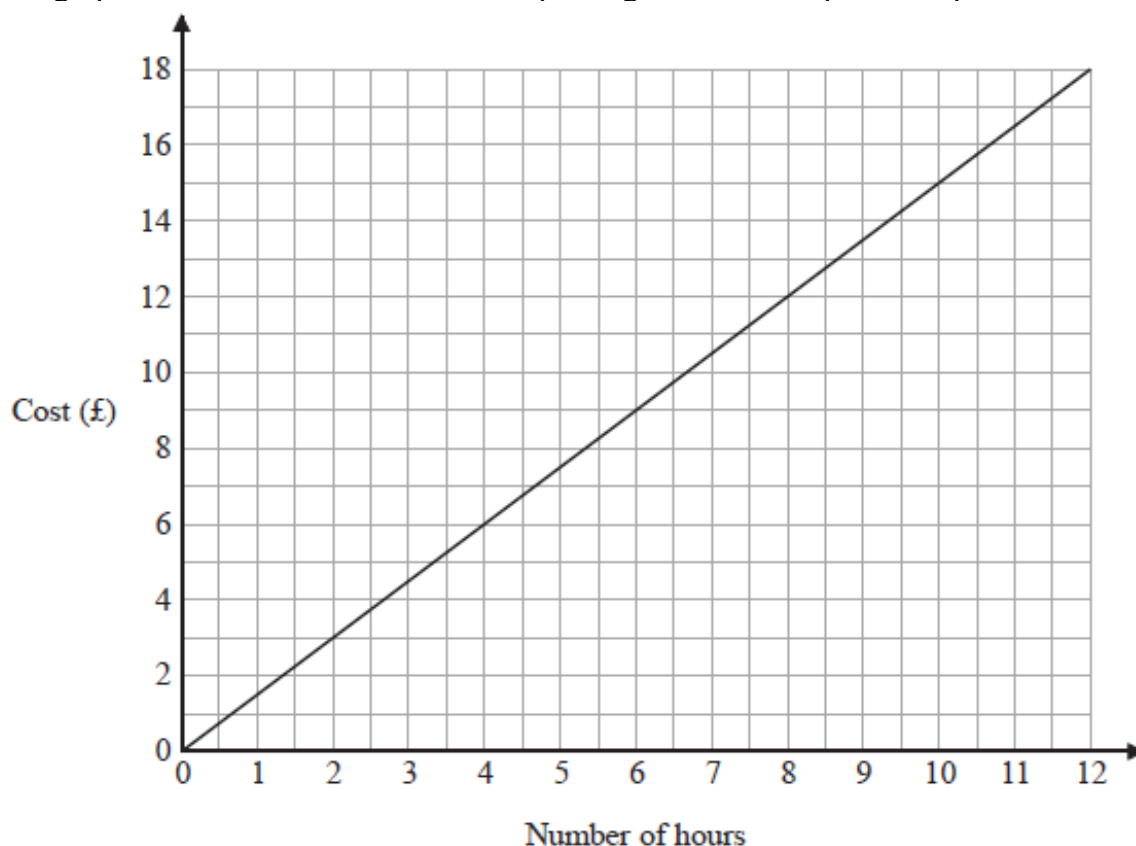
Estimated completion time = 30 minutes.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1** This graph can be used to find the cost of parking a car in a car park for up to 12 hours.



Use the graph to find the cost of parking a car for 4 hours.

£.....
(Total for Question 1 is 1 mark)

- 2** Here are the first five terms of a sequence.

3 8 13 18 23

Write down the next term of this sequence.

.....
(Total for Question 2 is 1 mark)

- 3** Write down two factors of 18

..... ,
(Total for Question 3 is 1 mark)

- 4 Curtis needs to buy some items for his sports club.
Here are the prices.

Item	Price
Footballs	£9.50 each
Hockey sticks	£30 for 2
Cricket bats	£23 each
Tennis balls	£5 for 4

Curtis needs to buy
5 footballs
6 hockey sticks
2 cricket bats
4 tennis balls.

Curtis has £200 to spend.
Show that Curtis can buy all the items he needs.

(Total for Question 4 is 4 marks)

- 5 Harris is buying a shirt and a tie.
He has a choice of three colours of shirt and a choice of three styles of tie.

Shirt	Tie
White (W)	Plain (P)
Blue (B)	Striped (S)
Grey (G)	Checked (C)

Harris is going to choose one shirt and one tie.
List all the possible combinations Harris can choose.

.....

.....

.....

(Total for Question 5 is 2 marks)

6 Simplify $3 \times 4t$

.....
(Total for Question 6 is 1 mark)

7 Write 0.9 as a fraction.

.....
(Total for Question 7 is 1 mark)

8 Lydia works for 4 hours.
She is paid £50
How much is Lydia paid per hour?

£.....
(Total for Question 8 is 2 marks)

9 Here is a list of numbers.

20 40 60 80 100

One of these numbers is a multiple of 25
Which number?

.....
(Total for Question 9 is 1 mark)

10 Work out 50% of 240

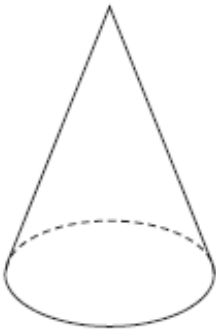
.....
(Total for Question 10 is 1 mark)

- 11 Work out $\frac{9.8 + 6.8}{4.2 \times 2.1}$
Give your answer as a decimal.
Write down all the figures on your calculator display.

.....
(Total for Question 11 is 2 marks)

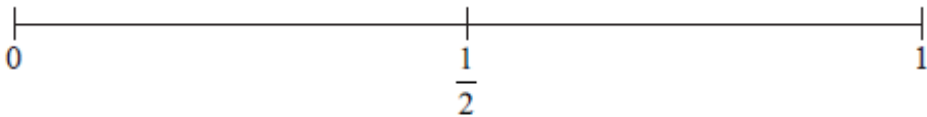
- 12 Here is a 3-D shape.

Write down the name of this 3-D shape.



.....
(Total for Question 12 is 1 mark)

- 13 Shari has a fair ordinary dice.
She rolls the dice once.
On the probability scale, mark with a cross (×) the probability that Shari gets an even number.



.....
(Total for Question 13 is 1 mark)

- 14 Write 6184 correct to the nearest hundred.

.....
(Total for Question 14 is 1 mark)

- 15 Write 0.7 as a fraction.

.....
(Total for Question 15 is 1 mark)

16 A car travels at an average speed of 37 miles per hour for 3 hours.
Work out the distance that the car travels in the 3 hours.

..... miles

(Total for Question 16 is 2 marks)

17 Asha buys 180 cans of cola.
The cans are sold in packs.
There are 12 cans in each pack.
Each pack costs £3
Work out the total cost of the cola Asha buys.

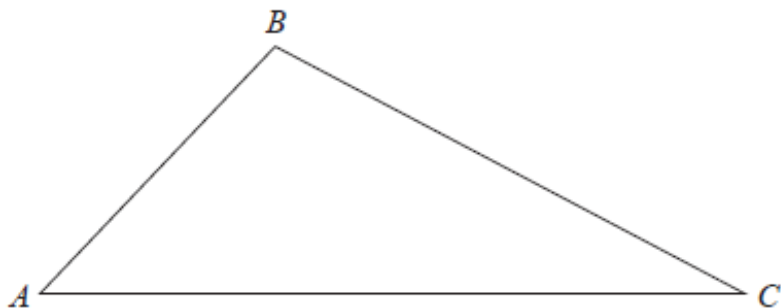
£.....

(Total for Question 16 is 3 marks)

18 There are 24 red counters and 40 blue counters in a bag.
Write down the ratio of the number of red counters to the number of blue counters in the bag.
Give your ratio in its simplest form.

.....
(Total for Question 18 is 2 marks)

19 Here is a triangle.



Measure the length of AC.

..... cm
(Total for Question 19 is 1 mark)

20 Rima is going to roll a fair 6-sided dice.
Choose the word that best describes the probability that the dice will land on an odd number.

impossible	unlikely	evens	likely	certain
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.....
(Total for Question 20 is 1 mark)

TOTAL FOR PAPER IS 30 MARKS

WEEK 1 TASK 5

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)



Pearson

1

Write 0.6 as a percentage

6

Here are four digits:

5 6 1 9

Write down the largest possible two digit number that can be made with two of the digits

2

Write brackets () in this statement to make it correct

$$7 \times 2 + 3 = 35$$

7

Find $\frac{1}{3}$ of 30

3

Simplify $5 \times m \times y \times 6$

8

Write down the number that is exactly halfway between 7 and 15

4

Work out the cube root of 64

9

Write in order of size.

Start with the smallest number

-7 7 0 -2 -1

5

Write 180 minutes in hours

10

Change 3 metres into cm

WEEK 2 TASKS

Make sure you check your answers and show all your working out. Try to make your work is well laid out and easy to read – if the examiner cannot understand what you have written they cannot award you any marks.

Have we said, “Show your working out”?

WEEK 2 TASK 1

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)



Pearson

1

Simplify $m^3 + m^3$

6

Write 19.4949 correct to the nearest whole number

2

Write down the value of the 2 in the number
12 345

7

Work out the square root of 81

3

Complete the statement below to make it correct

..... $\times m = 2m$

8

Simplify $3 \times a \times 4$

4

Write down a factor of 60 that is between 8 and 14

9

Here are four digits:
4 7 6 3

Write down the smallest 4-digit even number that can be made using each number only once

5

What is the time 2 hours 40 minutes after 8.05 am?

10

Change 40 centimetres into millimetres



WEEK 2 TASK 2

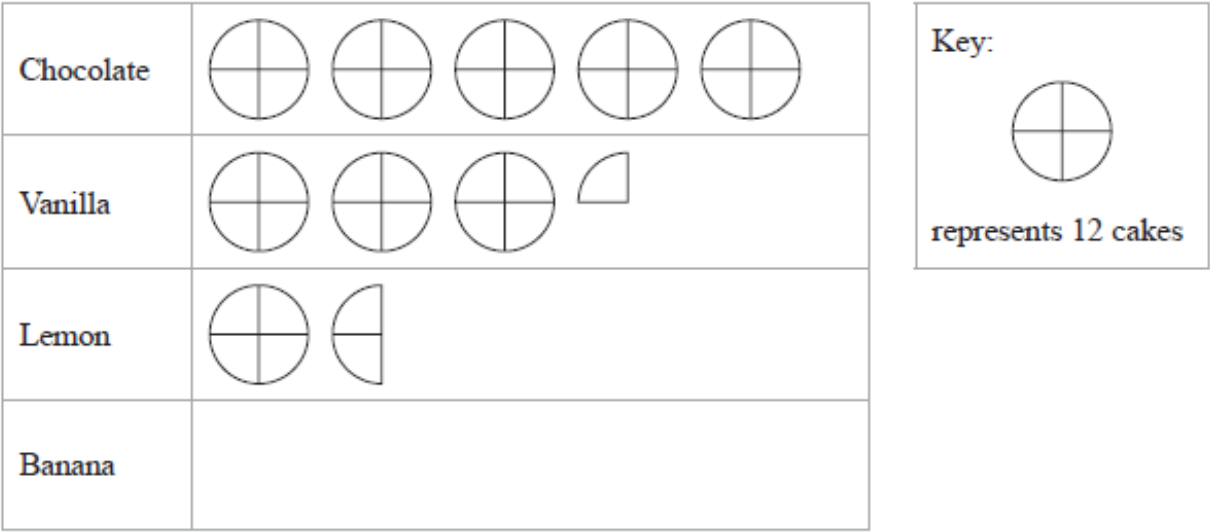
Estimated completion time = 30 minutes.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1 The pictogram shows information about the number of chocolate cakes, vanilla cakes and lemon cakes sold by Year 7 at a school fair.



24 banana cakes were sold by Year 7

(a) Use this information to complete the pictogram.

(1)

At the fair, Year 8 sold a total of 150 cakes.

(b) Which Year sold most cakes at the fair, Year 7 or Year 8?

You must show how you get your answer.

(3)

(Total for Question 1 is 4 marks)

- 2 7 -5 3 9 -2

Write these numbers in order of size.

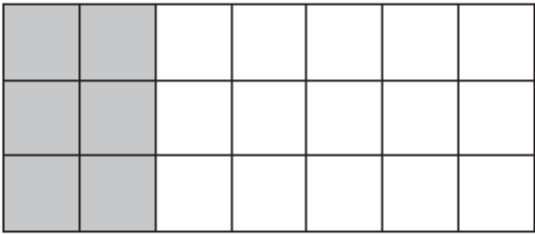
Start with the smallest number.

.....
(Total for Question 2 is 1 mark)

- 3 Write 35% as a decimal.

.....
(Total for Question 3 is 1 mark)

4 Here is a grid of squares.



What fraction of the grid is shaded?

.....
(Total for Question 4 is 1 mark)

5 Write the number three thousand one hundred and seven in figures.

.....
(Total for Question 5 is 1 mark)

6 Here are the first four terms of a number sequence.

97 91 85 79

(a) Explain how to work out the next number of the sequence.

.....
(1)

(b) Work out the difference between the 5th term and the 7th term of the sequence.

.....
(2)
(Total for Question 6 is 3 marks)

7 Gabriel thinks of a number.
He multiplies his number by 5 and then adds 7
His answer is 72

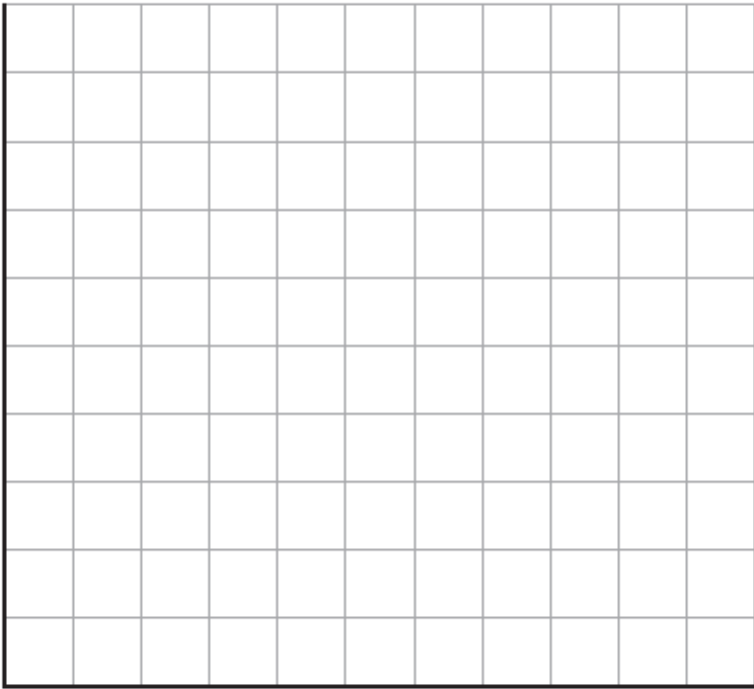
What number did Gabriel think of?

.....
(Total for Question 7 is 3 marks)

8 The table shows the number of books read by four people in one month.

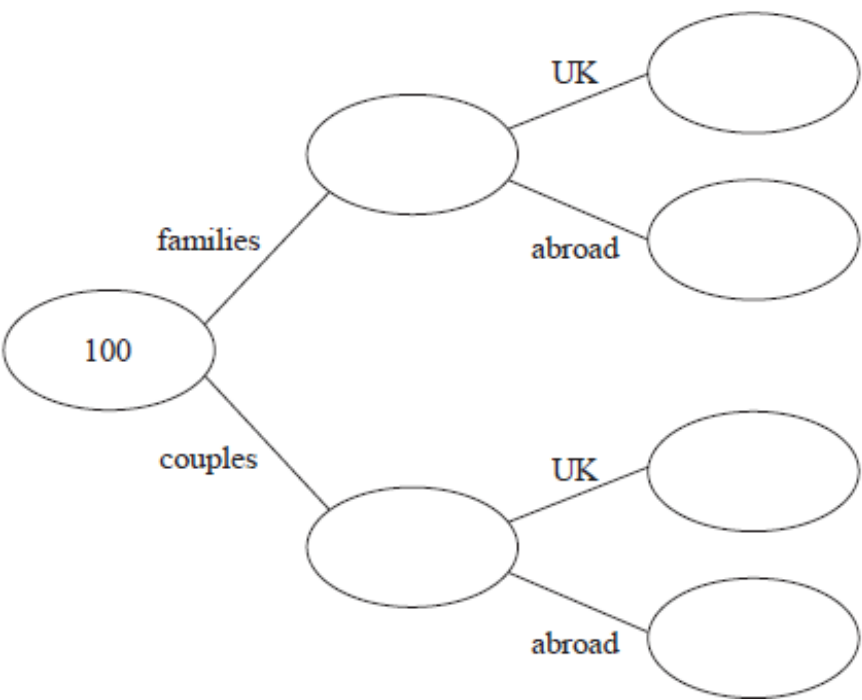
Person	Number of books
Ximena	7
Martha	9
Kezia	1
Tabby	5

On the grid, draw a bar chart to show the information in the table.



(Total for Question 8 is 3 marks)

- 9 A travel agent sold 100 holidays in April.
 Each of these holidays was in the UK or was abroad.
 64 of the 100 holidays were sold to families.
 The rest of the holidays were sold to couples.
 11 of the 18 holidays abroad were sold to couples.
 Use this information to complete the frequency tree.



(Total for Question 9 is 3 marks)

- 10 Write $\frac{3}{10}$ as a percentage.

.....%
 (Total for Question 10 is 1 mark)

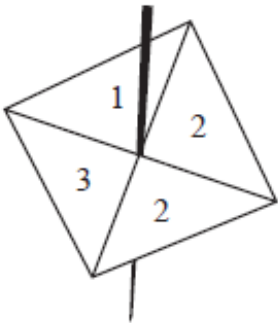
- 11 Simplify $m + m + m + m$

.....
 (Total for Question 11 is 1 mark)

- 12 Write down a number that is less than -5

.....
 (Total for Question 12 is 1 mark)

13 Here is a 4-sided spinner.



Samina spins the spinner once.
Choose the word that best describes the probability that the spinner lands on a number less than 4

impossible	unlikely	evens	likely	certain
------------	----------	-------	--------	---------

.....
(Total for Question 13 is 1 mark)

14 Wayne begins walking at 8 30 am.
He walks for 1 hour and 45 minutes.
Wayne then rests for 15 minutes.
He then walks for 85 minutes to a cafe.
Does Wayne get to the cafe before 12 noon?
You must show how you get your answer.

(Total for Question 14 is 4 marks)

- 15** There are only red counters, blue counters and green counters in a bag.
number of red counters : number of blue counters : number of green counters = 2 : 16 : 7
What fraction of the counters in the bag are green counters?

.....
(Total for Question 15 is 2 marks)

TOTAL FOR PAPER IS 30 MARKS

WEEK 2 TASK 3

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Write 0.73 as a percentage

6

Change 0.32 kilograms
to grams

2

Work out: $3 \times 5 + 7$

7

Write $\frac{9}{10}$ as a decimal

3

Write 80% as a fraction

8

Write 1.59 correct to
1 decimal place

4

Write the following numbers in order of
size. Start with the smallest number

-6 6 -5 0 12

9

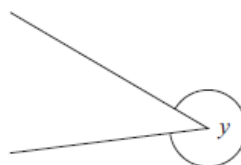
Simplify $3f \times 5g$

5

Write down a square
number that is between
10 and 50

10

Write down the mathematical name for
the type of angle marked y





WEEK 2 TASK 4

Estimated completion time = 30 minutes.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1** Max sees this special offer in a shop.

Buy one large plate and get one small plate for half the normal price.

The normal price of a large plate is £2

The normal price of a small plate is 80p

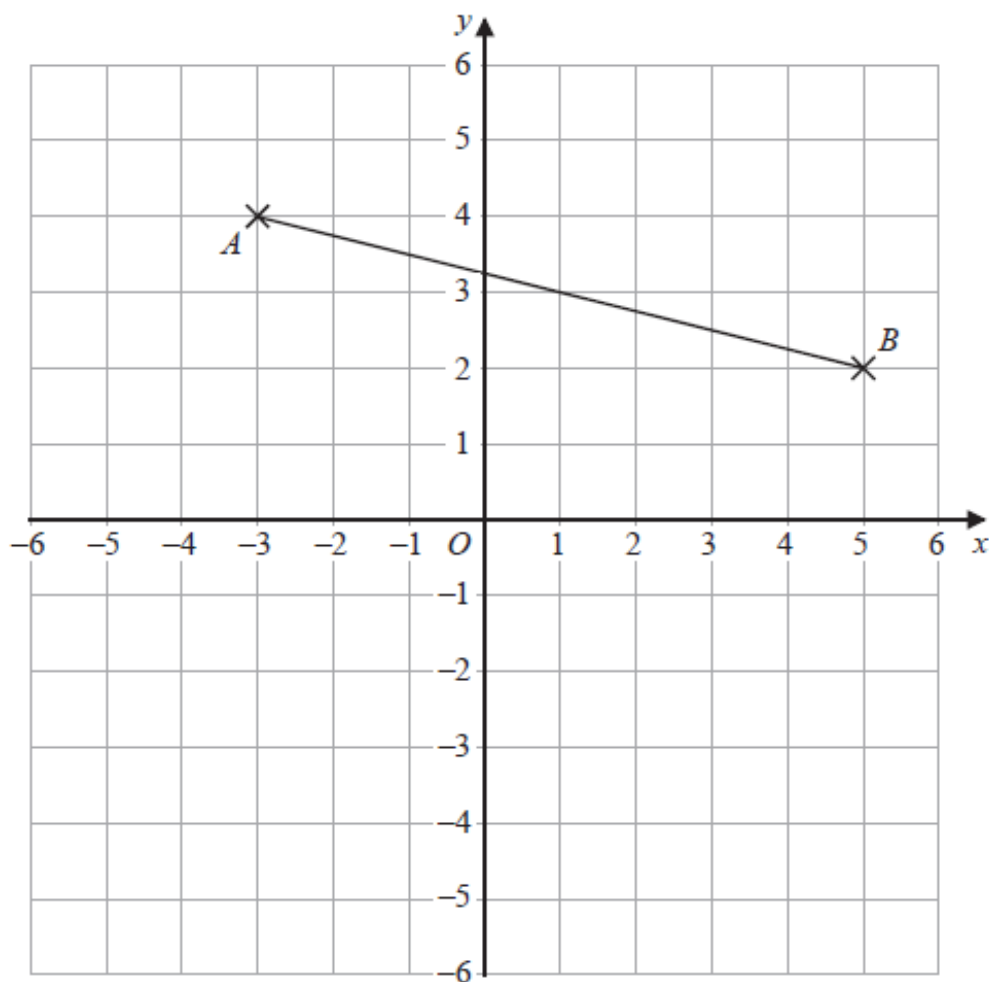
Max wants to buy 6 large plates and 6 small plates using this offer.

He has £15

Has Max got enough money?

You must show how you get your answer.

(Total for Question 1 is 4 marks)



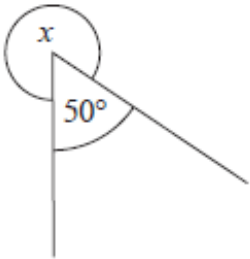
Write down the coordinates of the midpoint of AB .
(..... ,)
(Total for Question 2 is 1 mark)

- 3 There are 3 litres of oil in a can.
Jermaine uses 700 millilitres of the oil.

Work out the amount of oil left in the can.
Give your answer in millilitres.

..... millilitres
(Total for Question 3 is 3 marks)

4 (a) Work out the size of the angle marked x .



.....^o
(2)

A student says that an angle of 50° is an obtuse angle.
The student is wrong.

(b) Explain why.

.....
.....
(1)

(Total for Question 4 is 3 marks)

5 Work out $\frac{1}{5}$ of 300

.....
(Total for Question 5 is 1 mark)

6 Selina has a bag of 22 counters.

5 of the counters are blue.

9 of the counters are red.

8 of the counters are pink.

Selina takes at random a counter from the bag.

Write down the probability that Selina does **not** take a pink counter,

.....
(Total for Question 6 is 1 mark)

7 Here is a list of numbers.

2 4 4 7 8

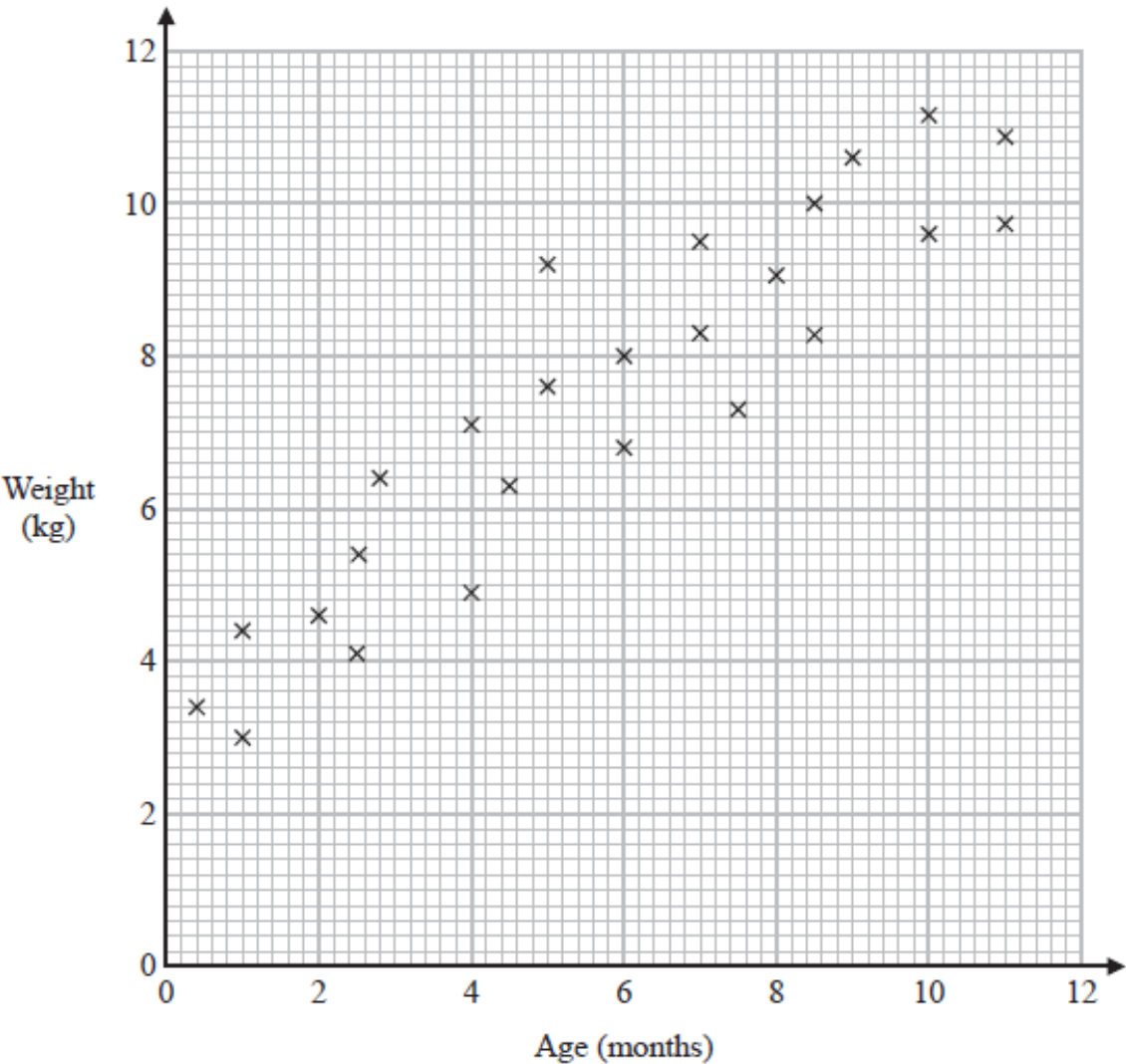
Work out the range of these numbers.

.....
(Total for Question 7 is 1 mark)

8 Simplify $\frac{15a}{3}$

.....
(Total for Question 8 is 1 mark)

*9 The scatter graph shows information about the ages and weights of some babies.



(a) Describe the relationship between the age and the weight of the babies.

.....

.....

.....

(1)

Another baby has a weight of 5.8 kg

(b) Using the scatter graph, find an estimate for the age of this baby.

..... months

(2)

(Total for Question 9 is 3 marks)

10 Matt is drawing a scale diagram.
1 cm represents 5 m.
The real distance between two points is 20 m.
What is the distance between the two points on the scale diagram?

..... cm
(Total for Question 10 is 1 mark)

11 Here are 6 numbers.

13 5 4 9 3 8

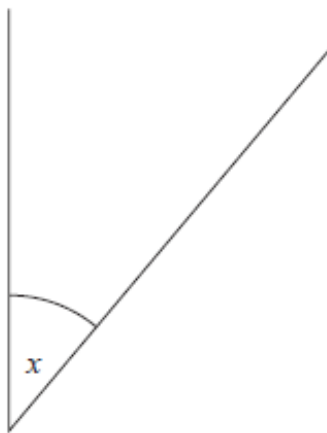
Work out the mean.

.....
(Total for Question 11 is 2 marks)

12 Shah takes an exam.
The exam is out of 60 marks.
Shah needs to score at least 70% of the marks to pass the exam.
He scores 45 marks.
Show that Shah passes the exam.

(Total for Question 12 is 2 marks)

13 Measure the size of the angle marked x .

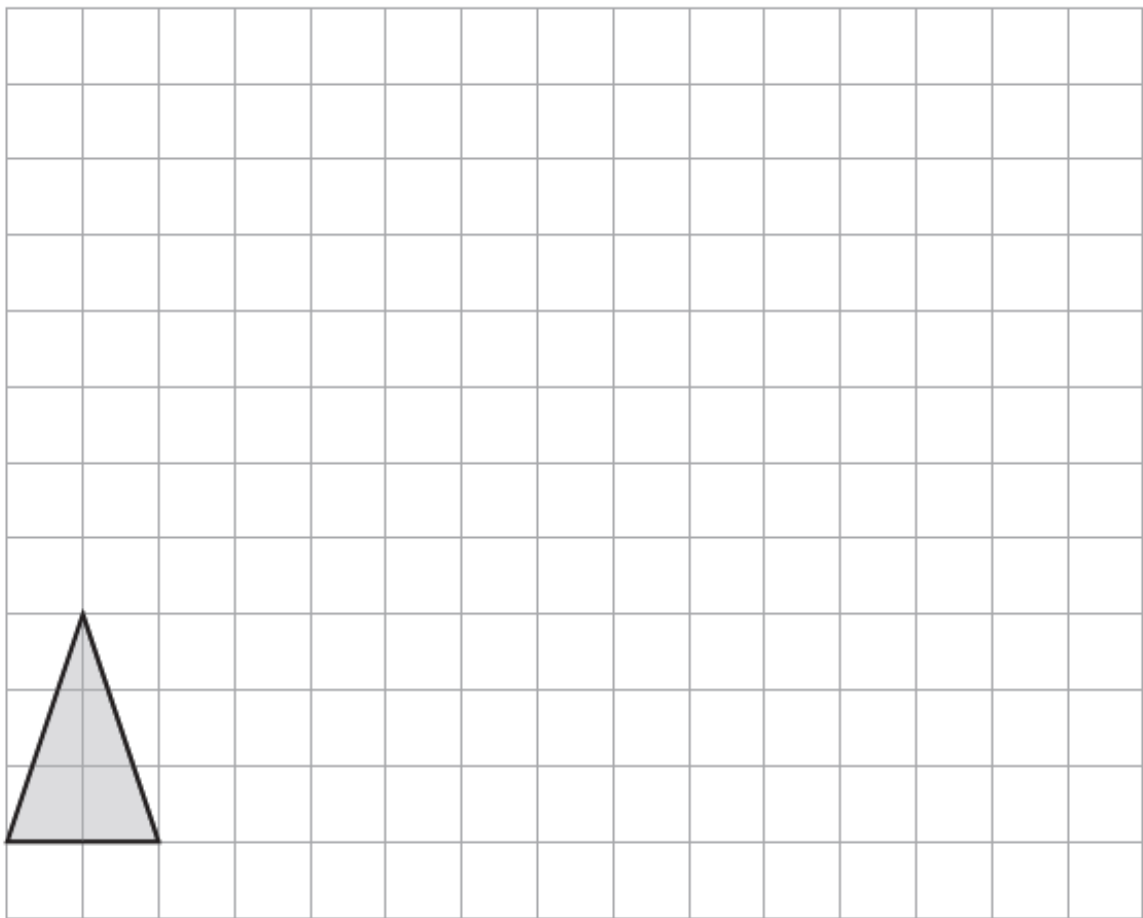


.....°
(Total for Question 13 is 1 mark)

14 There are 200 counters in a bag.
38 counters are red.
52 counters are blue.
The rest of the counters are yellow or green.
There are the same number of yellow counters as green counters.
What percentage of the counters in the bag are yellow?

.....%
(Total for Question 14 is 4 marks)

15



On the grid, draw an enlargement of the triangle with a scale factor of 3

(Total for Question 15 is 2 marks)

TOTAL FOR PAPER IS 30 MARKS

WEEK 2 TASK 5

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Write down a 6 digit number that has 4 as its thousands digit.
You can only use the digit 4 once

6

Write 72.88 correct to 1 significant figure

2

Change 565 cm into metres

7

Work out 2^3

3

Write down a square number that is also an odd number

8

Write down the value of the 4 in the number 542.3

4

Write 3% as a fraction

9

Simplify $m + m + m + m$

5

Here are the first 4 terms of a sequence

-1 4 9 14

Write down the next term and explain how you got your answer

10

Write down the name of this 3-D shape





WEEK 3 TASKS

Remember that you will have one paper in which you cannot use a calculator and two papers where a calculator is allowed. It is important that you are comfortable with using a calculator and know when it is appropriate to do so.

Don't forget to take your calculator to the calculator exams and don't forget to actually use it!

WEEK 3 TASK 1

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Write down two factors of 15

6

Change 1.5 kilometres to metres

2

Write brackets () in this statement
to make it correct

$$8 \times 4 + 6 = 38$$

7

Write the number two million in figures

3

Work out 31.7×100

8

Write 15% as a decimal

4

Write 4.666 correct to the
nearest whole number

9

Simplify $3e - e + 4e$

5

Write in order of size. Start with
the smallest number

1.02 0.12 1.20 0.21

10

Write 1476 to the nearest 10



WEEK 3 TASK 2

Estimated completion time = 30 minutes.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 (a) Work out $\frac{9.8 + 6.8}{4.2 \times 2.1}$

Give your answer as a decimal.

Write down all the figures on your calculator display.

.....
(2)

(b) Write your answer to part (a) correct to 2 decimal places.

.....
(1)

(Total for Question 1 is 3 marks)

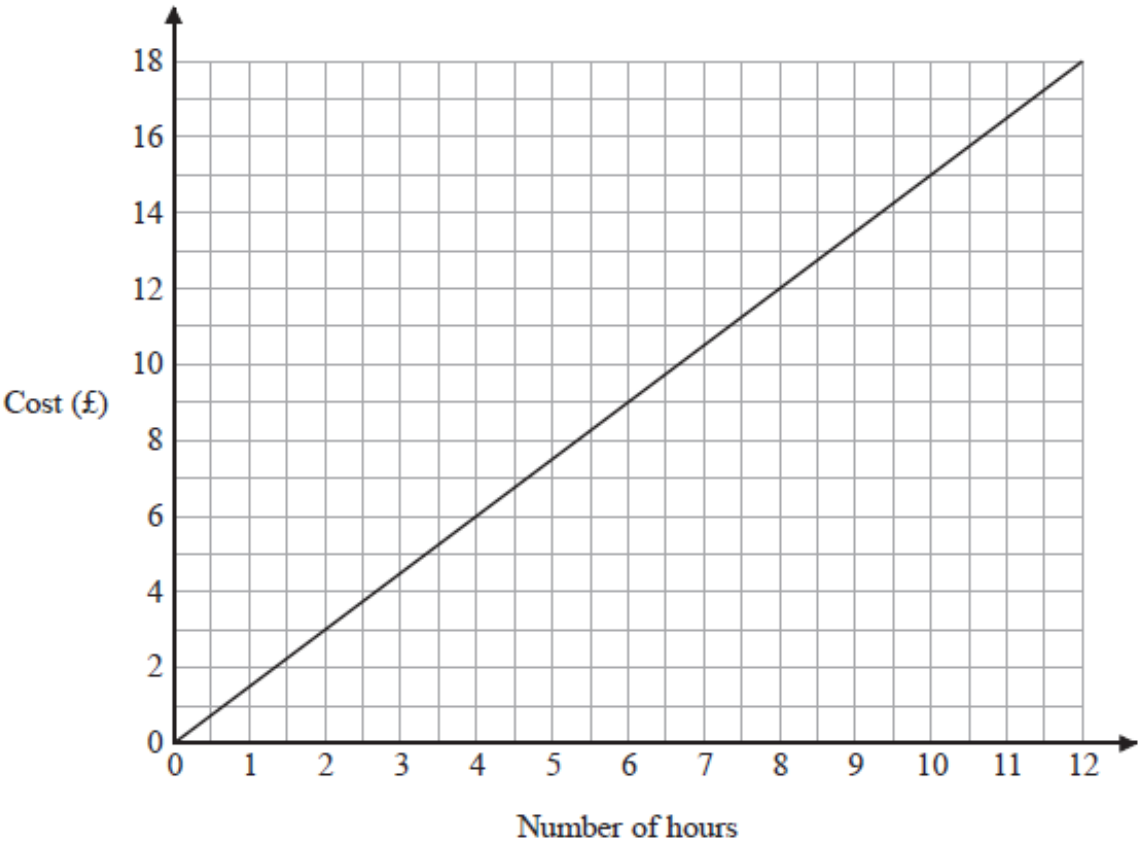
2 The table shows information about the weights of the people in a hotel lift.

Weight	Number of people
40 kg	1
50 kg	2
60 kg	4
70 kg	5
80 kg	3
90 kg	1

Show that the total weight of the people in the lift is less than 1200 kg.

(Total for Question 2 is 3 marks)

3 This graph can be used to find the cost of parking a car in a car park for up to 12 hours.



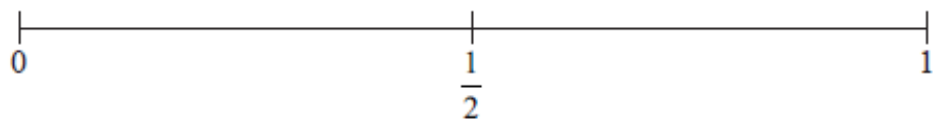
Justin drives into the car park at 08 00 in the morning.
When he drives out of the car park he has to pay £9
At what time does Justin drive out of the car park?

.....
(Total for Question 3 is 3 marks)

*4 Work out the value of $\frac{25-\sqrt{43.87}}{6+2.1^2}$
Write down all the figures on your calculator display.

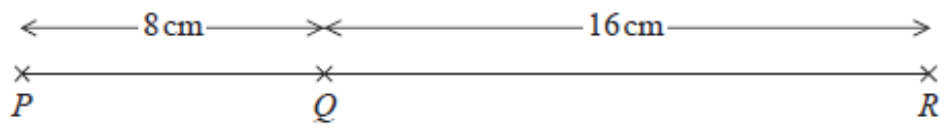
.....
(Total for Question 4 is 2 marks)

- 5 Shari has a fair ordinary dice.
 She rolls the dice once.
 On the probability scale, mark with a cross (×) the probability that Shari gets the number 7



(Total for Question 5 is 1 mark)

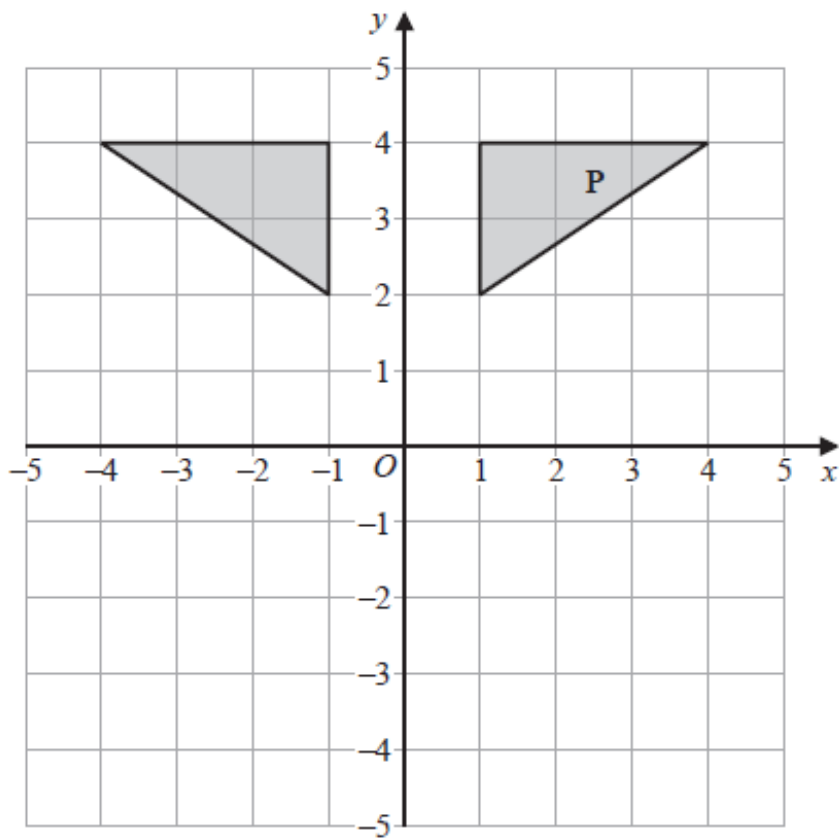
- 6 The diagram shows three motorway service stations P , Q and R on a map.



The map has a scale of 1 cm = 4 km.
 Work out the real distance from P to R .

..... km
 (Total for Question 6 is 3 marks)

- 7 Alex is asked to reflect shape **P** in the x -axis.
Here is the diagram Alex draws.



Explain the mistake Alex has made.

.....

.....

.....

(Total for Question 7 is 1 mark)

- 8 Change 7 metres to centimetres.

..... centimetres

(Total for Question 8 is 1 mark)

- 9 Change 9 metres into centimetres.

..... centimetres

(Total for Question 9 is 1 mark)

10 Write down a square number that is between 10 and 50

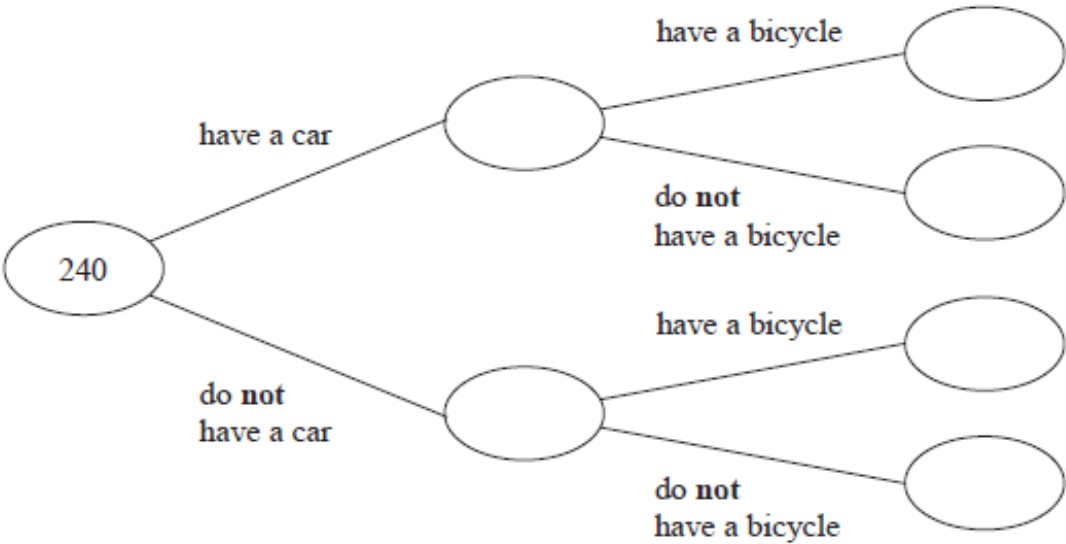
.....
(Total for Question 10 is 1 mark)

11 240 people work at a factory.

Of these people

- 150 have a car
- 110 have a bicycle
- 65 of the people who have a bicycle do **not** have a car.

(a) Use this information to complete the frequency tree.



(Total for Question 11 is 3 marks)

12 There are 50 teachers in a school.
This is $\frac{1}{16}$ of the total number of people in the school.
Work out the total number of people in the school.

.....
(Total for Question 12 is 2 marks)

***13** Karen is organising a party for a charity.

She spends
£100 on food
£120 on a hall
£80 on a DJ.

Karen sells 54 tickets for the party.
Each ticket costs £7.50
Work out the percentage profit Karen makes for the charity.

.....%
(Total for Question 13 is 4 marks)

***14** Expand and simplify $3(2y - 5) + 7(y + 2)$

.....
(Total for Question 14 is 2 marks)

15 Rima is going to roll a fair 6-sided dice.

(a) Choose the word that best describes the probability that the dice will land on the number 3

impossible	unlikely	evens	likely	certain
------------	----------	-------	--------	---------

.....
(Total for Question 15 is 1 mark)

TOTAL FOR PAPER IS 31 MARKS

WEEK 3 TASK 3

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Simplify $t^5 + t^5$

6

Write down the value of the 7 in the number 1074

2

What is the time 1 hours 20 minutes after 9.15 am?

7

Write down two factors of 12

3

Write 0.4 as a percentage

8

Here is a list of numbers

7 8 15 16 18 22

Write down the number from the list that is a multiple of 6

4

Write 327 correct to the nearest ten

9

Write down a 3 digit number that is a multiple of 5

5

Write 19% as a fraction

10

Write $\frac{9}{100}$ as a decimal



WEEK 3 TASK 4

Estimated completion time = 30 minutes.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1 Write 8061 correct to the nearest hundred.

.....
(Total for Question 2 is 1 mark)

- 2 Here are the first four terms of a number sequence.

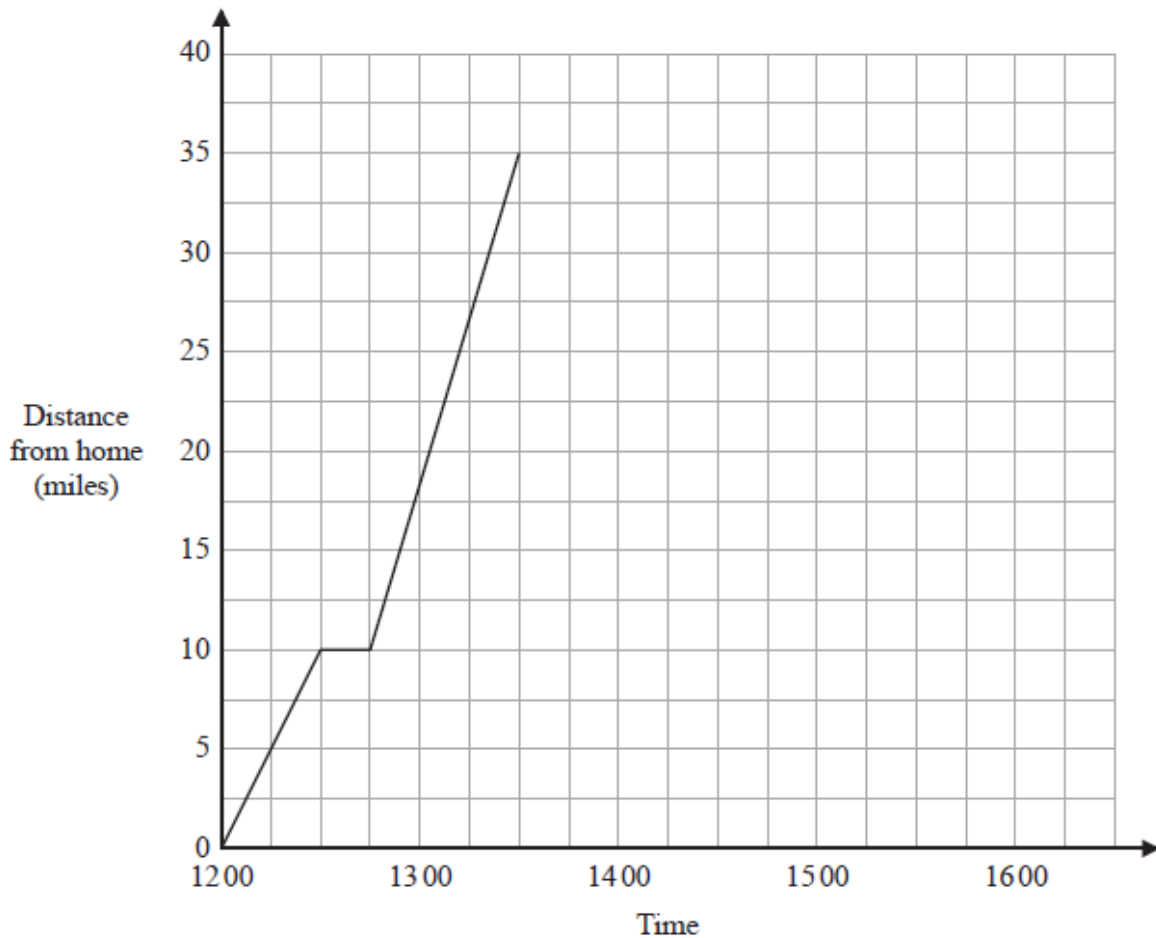
97 91 85 79

Explain why 52 is **not** a number in this sequence.

.....
.....
(Total for Question 2 is 1 mark)

- 3 Rowena drove from her home to a beach.

Here is a travel graph for her journey.



Rowena stopped at a cafe on her way to the beach.

(a) (i) How many minutes did Rowena take to drive to the cafe?

..... minutes
(1)

(ii) Write down the distance from Rowena's home to the cafe.

..... miles
(1)

Rowena stayed at the beach for $1\frac{1}{2}$ hours.

She then drove home without stopping.

Rowena arrived home at 16 00

(b) On the grid, complete the travel graph.

(2)

(Total for Question 3 is 4 marks)

***4** Ali buys packs of balloons and boxes of pencils.

There are 30 balloons in each pack.

There are 24 pencils in each box.

Ali buys exactly the same number of balloons and pencils.

Work out how many packs of balloons and how many boxes of pencils she could have bought.

You must show all your working.

..... packs of balloons

..... boxes of pencils

(Total for Question 4 is 3 marks)

- 5 Ralph rolls a biased dice once.
The probability that he gets the number 5 is 0.4

Work out the probability that Ralph does **not** get the number 5

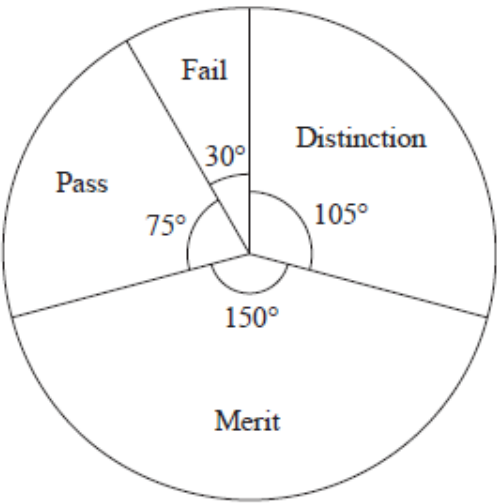
.....
(Total for Question 5 is 1 mark)

- 6 Write the following numbers in order of size.
Start with the smallest number.

$\frac{7}{12}$ 0.56 57% $\frac{6}{11}$ 0.558

.....
(Total for Question 6 is 2 marks)

- 7 Some students took a guitar exam.
The pie chart shows information about the grades the students got.



Write down the modal grade.

.....
(Total for Question 7 is 1 mark)

- 8 Write the following numbers in order of size.
Start with the smallest number.

5.625×10^4 5625 $56\,250 \times 10^{-3}$ $0.005\,625 \times 10^5$

.....
(Total for Question 8 is 2 marks)

- 9 Miklos is swimming lengths of a swimming pool.
Each length of the pool is 25 m.
Miklos has swum 178 lengths of the pool.
He wants to swim a total distance of 8050 m.
Calculate how many more lengths Miklos needs to swim.

.....
(Total for Question 9 is 3 marks)

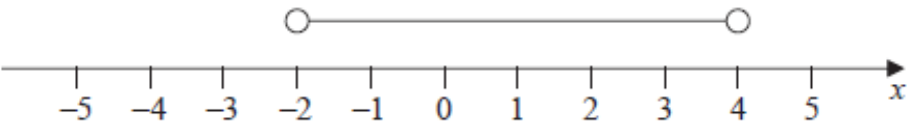
- 10 Mandy buys a 12 kilogram bag of dog food.
Mandy’s dog has 3 meals a day.
She gives her dog 105 grams of dog food for each of these meals.
How many complete weeks will the bag of dog food last?
You must show all your working.

.....
(Total for Question 10 is 5 marks)

- 11 Change 4000 grams into kilograms.

..... kilograms
(Total for Question 12 is 1 mark)

***12** Jenna is asked to show the inequality $-3 < x \leq 4$ on a number line.
Here is her answer.



Write down two mistakes Jenna has made.

1.....
.....
2.....
.....

(Total for Question 12 is 2 marks)

13 A chess match lasted $3\frac{1}{4}$ hours.
The match finished at 14 10
At what time did the chess match start?

.....
(Total for Question 13 is 2 marks)

14 There are only red beads and green beads in a bag.
number of red beads : number of green beads = 1 : 4
There are 35 red beads in the bag.
Work out the total number of beads in the bag.

.....
(Total for Question 14 is 2 marks)

TOTAL FOR PAPER IS 30 MARKS

WEEK 3 TASK 5

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Change 0.82 kilograms
to grams

6

Write down the 7th odd number

2

Write 0.23 as a percentage

7

Work out 3^2

3

Write down the value of the 7
in the number 8765

8

Write 37% as a fraction

4

Here is a list of numbers

20 40 60 80 100

One of these numbers is a multiple of 25
Which number?

9

Work out $\frac{1}{4}$ of 28

5

Write down two factors of 7

10

Simplify $7a + a - 5a$

WEEK 4 TASKS

Don't assume that questions with more marks are more difficult. Multi-mark questions are usually designed to enable all students to gain some marks even if they sometimes are not able to finish them. The important thing is to attempt every question. Sometimes once you have made a start the maths that is required will reveal itself and underlining key words may help.

Remember: have a go at every question!

WEEK 4 TASK 1

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Change 6.5 kg into grams

6

Work out

$$20 \div (3 + 2)$$

2

Write down two factors of 35

7

Change 53 centimetres to millimetres

3

Write these numbers in order of size.
Start with the smallest number

$\frac{1}{2}$ 0.55 45%

8

Write 23% as a fraction

4

Write down the value of the 6
in the number 16 007

9

Solve: $\frac{y}{3} = 12$

5

Simplify $4f - 2f + f$

10

Write 0.3 as a fraction

WEEK 4 TASK 2



Estimated completion time = 30 minutes.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1** For a football match,
297 tickets were sold for £9.50 each.
399 tickets were sold for £19.50 each.
- (a) Work out an estimate for the total amount of money paid for these tickets.
You must show all your working.

£.....
(3)

- (b) Is your answer to part (a) an underestimate or an overestimate?
Give a reason for your answer.

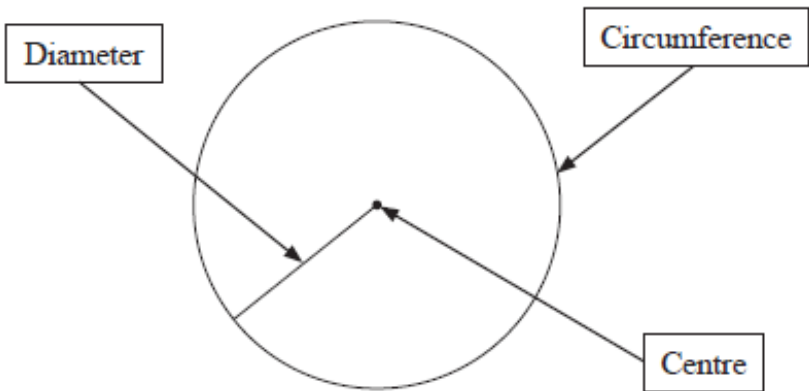
.....
.....
.....
(1)

(Total for Question 1 is 4 marks)

- 2** Steve is buying a car.
The car costs £12 000
Steve pays 25% of the cost as a deposit.
He pays the rest of the cost in 20 equal monthly payments.
How much is each monthly payment?

£.....
(Total for Question 2 is 4 marks)

3 Freddie adds labels to this diagram of a circle.



Explain why one of the labels is wrong.

.....

.....

(Total for Question 3 is 1 mark)

4 Some people watched a film at the cinema.
number of adults : number of children = 2 : 5

(b) What fraction of these people were adults?

.....

(1)

On Friday,
500 people watched a film at the cinema.
70% of these people were children.
On Saturday,
720 people watched the film at the cinema.
 $\frac{5}{8}$ of these people were children.

Kasim thinks more children watched the film on Friday than on Saturday.

(c) Is Kasim correct? You must show how you get your answer.

(3)

(Total for Question 4 is 4 marks)

- 5 $P = 2g + 4h$
 (a) Work out the value of g when $P = 38$ and $h = 3$

$g = \dots\dots\dots$
(2)

- $V = 3r - q$
(b) Work out the value of V when $r = -3$ and $q = 2$

$V = \dots\dots\dots$
(2)

(Total for Question 5 is 4 marks)

- 6 Simplify $19 + 5b + 4c - 7b + c$

$\dots\dots\dots$
(Total for Question 6 is 2 marks)

- *7 Work out 6.3×2.4

$\dots\dots\dots$
(Total for Question 7 is 3 marks)

8 Work out $\frac{6}{7} \times \frac{5}{12}$
Give your answer as a fraction in its simplest form.

.....
(Total for Question 8 is 2 marks)

9 Work out $\frac{3}{5} \div \frac{1}{6}$
Give your answer as a mixed number.

.....
(Total for Question 9 is 3 marks)

10 Chloe is making scrunchies.
Chloe has a large number of hair bands.
Each hair band costs 8p.
She buys 100 g of wool for £3
Chloe uses 1 hair band and 5 g of wool to make each scrunchy.
She makes as many scrunchies as she can.
Work out the total cost of each scrunchy that she makes.
Give your answer in pence.

.....p
(Total for Question 10 is 4 marks)

TOTAL FOR PAPER IS 31 MARKS

WEEK 4 TASK 3

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Change 2.7 kg into grams

6

Write the number five million
in figures

2

Write $\frac{7}{100}$ as a decimal

7

Write 0.3 as a percentage

3

Write 4.444 correct to the
nearest whole number

8

Change 7.3 m into mm

4

Write brackets () in this
statement to make it correct

$$8 \times 2 + 6 = 22$$

9

Here is a list of four fractions

$$\frac{4}{16} \quad \frac{2}{8} \quad \frac{15}{60} \quad \frac{3}{9}$$

One of these fractions is **not** equivalent to $\frac{1}{4}$

Write down this fraction

5

Simplify $y + 3y - 2y$

10

Write 7829 to the nearest 1000



WEEK 4 TASK 4

Estimated completion time = 30 minutes.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1** 3 kg of flour costs £4.05
5 kg of flour and 6 kg of sugar cost £11.85
Work out the cost of 2 kg of flour and 5 kg of sugar.

£.....

(Total for Question 1 is 4 marks)

- 2** Martha and Nabeel share £120
Martha gets 72% of the money.
She spends 30% of the money she gets.
How much money does Martha have left?

£.....

(Total for Question 2 is 3 marks)

3 Here are the first five terms of a sequence.

3 8 13 18 23

Write down the ratio of the second term to the fourth term.
Give your ratio in its simplest form.

.....
(Total for Question 3 is 2 marks)

*4 Write 60 as a product of its prime factors.

.....
(Total for Question 4 is 2 marks)

- 5** 160 people were asked to choose their favourite type of book.
They each chose from romance or adventure or horror or thriller.
85 of these people were children.
The rest were adults.
19 of the 33 people who chose romance were children.
34 of the 76 people who chose adventure were adults.
7 adults chose thriller.
The number of children who chose thriller was the same as the number of adults who chose horror.
Work out the total number of people who chose horror.
You must show how you get your answer.

.....
(Total for Question 5 is 4 marks)

6 Here are the heights, in cm, of 16 sunflowers.

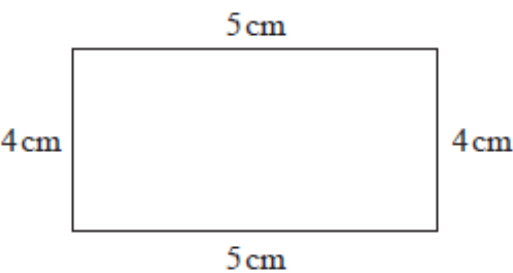
168	173	172	180	162	191	183	160
178	184	197	177	172	186	188	180

Show this information in a stem and leaf diagram.

Key:

(Total for Question 6 is 3 marks)

7 Milo is trying to find the area of this rectangle.



He writes,

“The area is 400 cm² because $5 \times 4 \times 5 \times 4 = 400$ ”

(a) Explain what is wrong with Milo’s method.

.....

.....

.....

(1)

Anya works out the area of a shape.
Her answer is 86 cm.

(b) Explain why her answer cannot be fully correct.

.....

.....

.....

(1)

(Total for Question 7 is 2 marks)

- *8** There are 48 counters in a bag.
There are only red counters and blue counters in the bag.

number of red counters : number of blue counters = 1 : 2

Helen has to work out how many red counters are in the bag.
She says: “There are 24 red counters in the bag because 1 is half of 2 and 24 is half of 48”
Is Helen correct? You must give a reason for your answer.

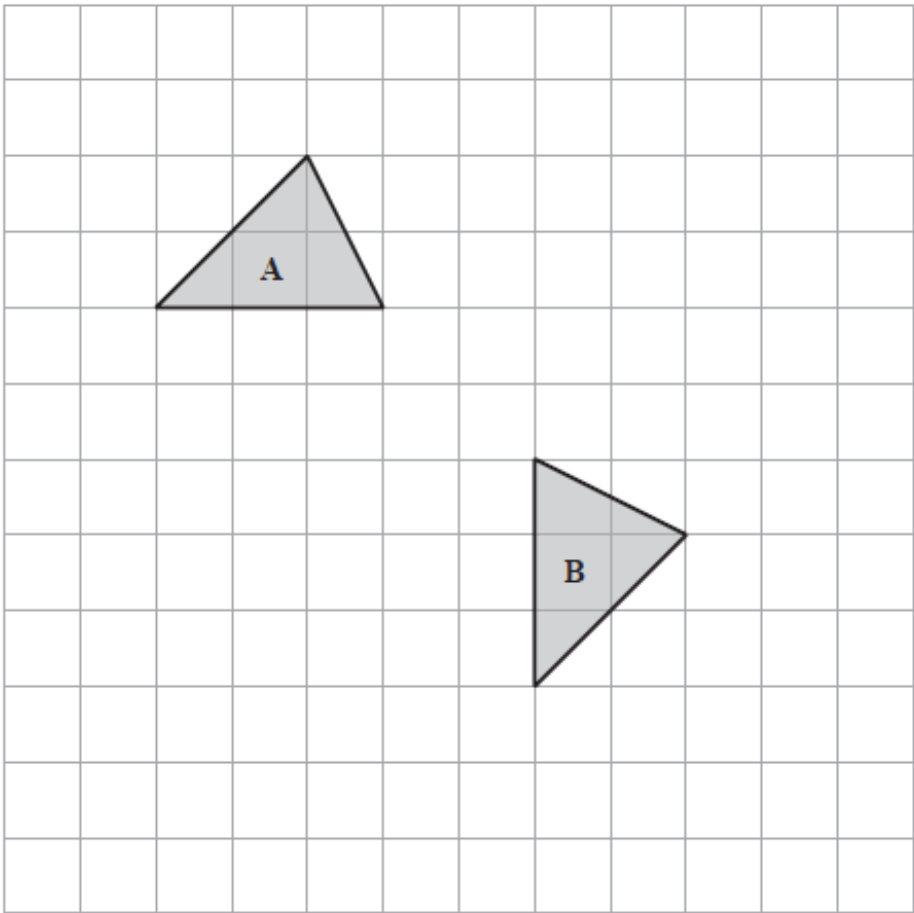
.....

.....

.....

(Total for Question 8 is 1 mark)

- 9** Shape A is reflected in a mirror line to give shape B.



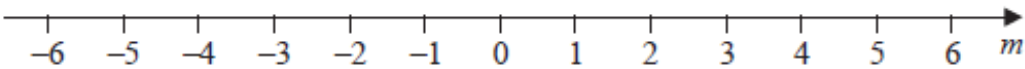
On the grid, draw the mirror line.

(Total for Question 9 is 1 mark)

- 10** There are 3 cinemas **A**, **B** and **C**.
The mean number of seats per cinema is 380
There are 350 seats in cinema **A**.
There are 250 seats in cinema **B**.
Work out the number of seats in cinema **C**.

.....
(Total for Question 10 is 4 marks)

- *11** On the number line below, show the inequality $-4 \leq m < 1$



(Total for Question 11 is 2 marks)

- 12** In the space below, draw a sketch of a triangular prism.

(Total for Question 12 is 1 mark)

TOTAL FOR PAPER IS 29 MARKS

WEEK 4 TASK 5

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)



Pearson

1

Simplify $k^5 + k^5 + k^5$

6

Write a number in each box to make the calculation correct

$$56.3 + \boxed{} = 100$$

$$\frac{2}{7} + \boxed{} = 1$$

2

Change 7700 millilitres to litres

7

Write 0.37 as a percentage

3

Write 0.31 as a fraction

8

Write down a multiple of 8 that is between 41 and 60

4

Work out 50% of 240

9

Here is a list of numbers.

5 11 18 22 29 31

Write down the number from the list that is a multiple of 3

5

Work out 5^2

10

Work out $\frac{1}{6}$ of 66



MARKSCHEMES

WEEK 4 TASK 1

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)



Pearson

1

Change 6.5 kg into grams

6500 grams

6

Work out

$$20 \div (3 + 2)$$

4

2

Write down two factors of 35

Any two from

1, 5, 7 or 35

7

Change 53 centimetres to millimetres

530 millimetres

3

Write these numbers in order of size.
Start with the smallest number

$\frac{1}{2}$ 0.55 45%
45% $\frac{1}{2}$ 0.55

8

Write 23% as a fraction

$\frac{23}{100}$
or equivalent

4

Write down the value of the 6
in the number 16 007

6000

9

Solve: $\frac{y}{3} = 12$

$y = 36$

5

Simplify $4f - 2f + f$

$3f$

10

Write 0.3 as a fraction

$\frac{3}{10}$
or equivalent

WEEK 4 TASK 2

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 For a football match,

297 tickets were sold for £9.50 each.

399 tickets were sold for £19.50 each.

(a) Work out an estimate for the total amount of money paid for these tickets.

You must show all your working. 1 mark for either of these

$$297 \rightarrow 300$$

$$9.50 \rightarrow \pounds 10$$

$$399 \rightarrow 400$$

$$19.50 \rightarrow \pounds 20$$

$$300 \times 10$$

$$400 \times 20$$

$$3000 + 8000 = 11000$$

$$\pounds 11000$$

Final mark

1 mark for any of these

(3)

(b) Is your answer to part (a) an underestimate or an overestimate?

Give a reason for your answer.

1 mark

its an overestimate because all the numbers
used were rounded up

(1)

(Total for Question 1 is 4 marks)

2 Steve is buying a car.

The car costs £12 000

Steve pays 25% of the cost as a deposit.

He pays the rest of the cost in 20 equal monthly payments.

How much is each monthly payment?

1 mark

$$25\% \text{ of } 12000 = 12000 \div 4 = 3000 \text{ \pounds deposit}$$

$$\text{left to pay} = 12000 - 3000 = 9000$$

1 mark

1 mark

$$9000 \div 20 = \pounds 450$$

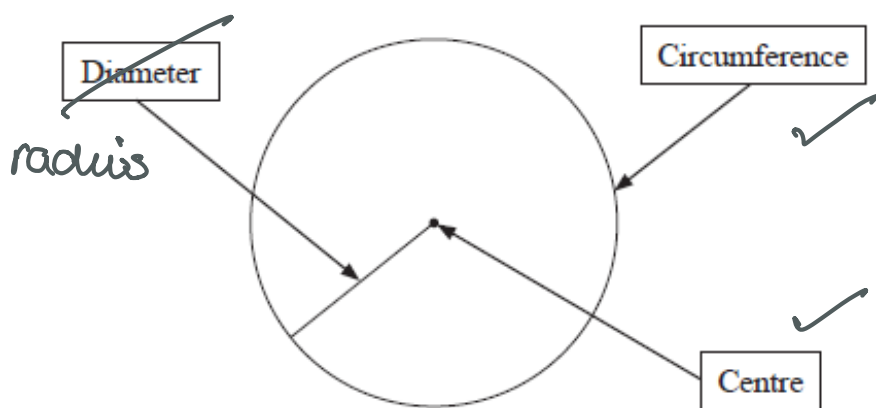
$$\begin{array}{r} 450 \\ 20 \overline{) 9000} \end{array}$$

$$\pounds 450$$

Final mark

(Total for Question 2 is 4 marks)

3 Freddie adds labels to this diagram of a circle.



Explain why one of the labels is wrong.

he has labelled the radius as the diameter

1 mark

(Total for Question 3 is 1 mark)

4 Some people watched a film at the cinema.

number of adults : number of children = 2 : 5

(b) What fraction of these people were adults?



$$\frac{2}{7}$$

1 mark

(1)

On Friday,

500 people watched a film at the cinema.

70% of these people were children.

On Saturday,

720 people watched the film at the cinema.

$\frac{5}{8}$ of these people were children.

Kasim thinks more children watched the film on Friday than on Saturday.

$$8 \times 90 = 720$$

(c) Is Kasim correct? You must show how you get your answer.

500 1 mark

FRI

$$\begin{aligned} 10\% &= 50 \\ 70\% &= 50 \times 7 \end{aligned}$$

= 350 children

SAT.

$$\begin{aligned} 720 \\ \frac{5}{8} \times 720 &= (720 \div 8) \times 5 \\ &= 450 \text{ children} \end{aligned}$$

1 mark

No, $450 > 350$

Final mark

(3)

(Total for Question 4 is 4 marks)

Must be supported by correct figures

- 5 $P = 2g + 4h$
 (a) Work out the value of g when $P = 38$ and $h = 3$

$$38 = 2g + 4 \times 3 \quad \text{1 mark}$$

$$38 - 12 = 2g$$

$$26 = 2g \quad g = 13$$

$$g = \boxed{13} \quad \text{Final mark} \quad (2)$$

$$V = 3r - q$$

- (b) Work out the value of V when $r = -3$ and $q = 2$

$$V = 3 \times -3 - 2 \quad \text{1 mark}$$

$$= -9 - 2$$

$$= -11$$

$$V = \boxed{-11} \quad \text{Final mark} \quad (2)$$

(Total for Question 5 is 4 marks)

- 6 Simplify $19 + 5b + 4c - 7b + c$

$$19 + 5b - 7b + 4c + c$$

$$19 - 2b + 5c \quad \text{1 mark for either of these}$$

$$\boxed{19 - 2b + 5c} \quad \text{Final mark} \quad (2)$$

(Total for Question 6 is 2 marks)

- *7 Work out 6.3×2.4

$$63 \times 24$$

$$= 1512$$

$$\text{so } 6.3 \times 2.4 = 15.12$$

$$\begin{array}{r} 63 \\ \times 24 \\ \hline 252 \\ 1260 \\ \hline 1512 \end{array} \quad \begin{array}{l} \text{1 mark} \\ \text{1 mark for digits 1512} \end{array}$$

$$\boxed{15.12} \quad \text{Final mark}$$

(Total for Question 7 is 3 marks)

8 Work out $\frac{6}{7} \times \frac{5}{12}$

Give your answer as a fraction in its simplest form.

$\frac{6}{7} \times \frac{5}{12} = \frac{30}{84}$ 1 mark

$\frac{30}{84} = \frac{15}{42} = \frac{5}{14}$

$\frac{5}{14}$ Final mark

(Total for Question 8 is 2 marks)

9 Work out $\frac{3}{5} \div \frac{1}{6}$

Give your answer as a mixed number.

1 mark $\frac{3}{5} \times \frac{6}{1} = \frac{18}{5}$ 1 mark

$\frac{18}{5} = 3\frac{3}{5}$

$3\frac{3}{5}$ Final mark

(Total for Question 9 is 3 marks)

10 Chloe is making scrunchies.

Chloe has a large number of hair bands.
Each hair band costs 8p.

She buys 100 g of wool for £3

Chloe uses 1 hair band and 5 g of wool to make each scrunchy.
She makes as many scrunchies as she can.

Work out the total cost of each scrunchy that she makes.
Give your answer in pence.

$100g \div 5 = 20$ 1 mark $100g = £3 = 300p$ 1 mark
 $\div 20$
 $5g = \frac{300}{20} = 15p$

Total cost = $8p + 15p$ 1 mark

23 Final mark

(Total for Question 10 is 4 marks)

TOTAL FOR PAPER IS 31 MARKS

WEEK 4 TASK 3

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Change 2.7 kg into grams

2700 grams

6

Write the number five million
in figures

5 000 000

2

Write $\frac{7}{100}$ as a decimal

0.07

7

Write 0.3 as a percentage

30%

3

Write 4.444 correct to the
nearest whole number

4

8

Change 7.3 m into mm

7300 mm

4

Write brackets () in this
statement to make it correct

$(8 \times 2) + 6 = 22$

9

Here is a list of four fractions

$\frac{4}{16}$ $\frac{2}{8}$ $\frac{15}{60}$ $\frac{3}{9}$

One of these fractions is **not** equivalent to $\frac{1}{4}$

Write down this fraction

$\frac{3}{9}$

5

Simplify $y + 3y - 2y$

2y

10

Write 7829 to the nearest 1000

8000

WEEK 4 TASK 4

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1 3 kg of flour costs £4.05
5 kg of flour and 6 kg of sugar cost £11.85
Work out the cost of 2 kg of flour and 5 kg of sugar.

3 kg flour = £4.05
1 kg = £1.35
5 kg = 6.75

1 mark

6 kg sugar = 11.85 - 6.75
= 5.10
1 kg = 5.10 ÷ 6
= 0.85

1 mark

TOTAL. 1.35 × 2 + 5 × 0.85
= 2.70 + 4.25

1 mark

£ 6.95 Final mark
(Total for Question 1 is 4 marks)

- 2 Martha and Nabeel share £120
Martha gets 72% of the money.
She spends 30% of the money she gets.
How much money does Martha have left?

0.72 × 120
= £86.40

1 mark

spends
0.3 × 86.40
= 25.92

1 mark

has. 86.40 - 25.92

£ 60.48 Final mark
(Total for Question 2 is 3 marks)

3 Here are the first five terms of a sequence.

1	2	3	4	5
3	8	13	18	23

Write down the ratio of the second term to the fourth term.
Give your ratio in its simplest form.

8 : 18

4 : 9

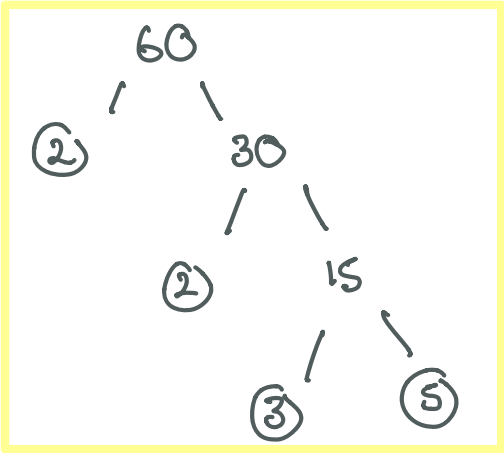
1 mark

4 : 9

Final mark

(Total for Question 3 is 2 marks)

*4 Write 60 as a product of its prime factors.



1 mark

$2 \times 2 \times 3 \times 5$

Final mark

$2 \times 2 \times 3 \times 5$ or $2^2 \times 3 \times 5$

(Total for Question 4 is 2 marks)

5 160 people were asked to choose their favourite type of book.
 They each chose from romance or adventure or horror or thriller.

85 of these people were children.
 The rest were adults.

19 of the 33 people who chose romance were children.
 34 of the 76 people who chose adventure were adults.
 7 adults chose thriller.

The number of children who chose thriller was the same as the number of adults who chose horror.

Work out the total number of people who chose horror.
 You must show how you get your answer.

1 mark for 14, 42 or 75

	Romance	Adv.	Horror	Thriller	Total
Adults	$33-19$ 14	34	20	7	$160-85$ = 75
Children	19	$76-34$ 42		20	85
Total	33	76		27	160

1 mark

1 mark

$$75 - (14 + 34 + 7)$$

$$= 20$$

$$160 - (33 + 76 + 27)$$

= 24

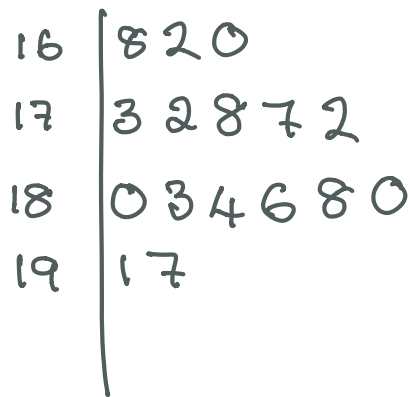
Final mark

(Total for Question 5 is 4 marks)

6 Here are the heights, in cm, of 16 sunflowers.

168 173 172 180 162 191 183 160
178 184 197 177 172 186 188 180

Show this information in a stem and leaf diagram.



2 marks for fully correct diagram

1 mark for unordered diagram

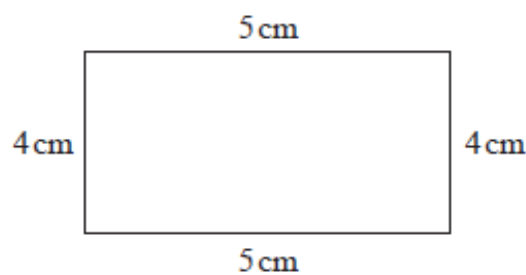
16	0 2 8
17	2 2 3 7 8
18	0 0 3 4 6 8
19	1 7

1 mark for key

Key:
16 | 7 = 167

(Total for Question 6 is 3 marks)

7 Milo is trying to find the area of this rectangle.



He writes,

“The area is 400 cm² because $5 \times 4 \times 5 \times 4 = 400$ ”

(a) Explain what is wrong with Milo’s method.

They should have done $5 \times 4 = 20$ 1 mark

.....

.....

(1)

Anya works out the area of a shape.

Her answer is 86 cm.

(b) Explain why her answer cannot be fully correct.

The units should be cm² not cm 1 mark

.....

.....

(1)

(Total for Question 7 is 2 marks)

*8 There are 48 counters in a bag.
There are only red counters and blue counters in the bag.

number of red counters : number of blue counters = 1 : 2

Helen has to work out how many red counters are in the bag.

She says: “There are 24 red counters in the bag because 1 is half of 2 and 24 is half of 48”

Is Helen correct? You must give a reason for your answer.

No

$48 \div 3 = 16$

There are 16 red counters

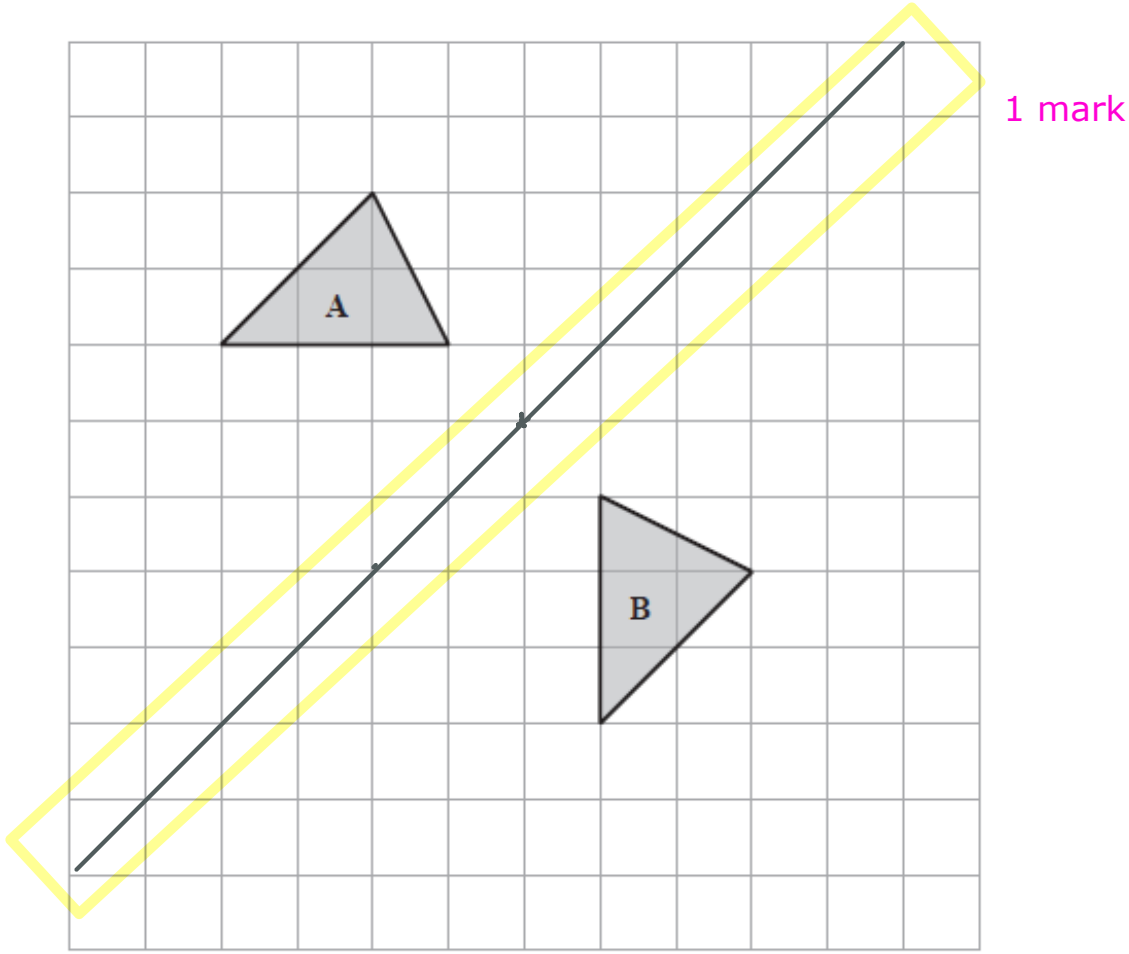
R B

1 : 2 => 16 : 32

1 mark

(Total for Question 8 is 1 mark)

9 Shape A is reflected in a mirror line to give shape B.



On the grid, draw the mirror line.

(Total for Question 9 is 1 mark)

WEEK 4 TASK 5

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Simplify $k^5 + k^5 + k^5$

$3k^5$

6

Write a number in each box to make the calculation correct

$$56.3 + \boxed{43.7} = 100$$

$$\frac{2}{7} + \boxed{\frac{5}{7}} = 1$$

2

Change 7700 millilitres to litres

7.7 litres

7

Write 0.37 as a percentage

37%

3

Write 0.31 as a fraction

$\frac{31}{100}$

or equivalent

8

Write down a multiple of 8 that is between 41 and 60

48 or 56

4

Work out 50% of 240

120

9

Here is a list of numbers.

5 11 18 22 29 31

Write down the number from the list that is a multiple of 3

18

5

Work out 5^2

25

10

Work out $\frac{1}{6}$ of 66

11

WEEK 5 TASKS

Managing your time in the exam is an important skill. Each paper is 90 minutes in length, and you need to make sure that you are using all the allocated time. Look at the number of marks for guidance where 1 mark = 1 minute. The early one mark question may not take one whole minute, but this extra time can be used for tackling trickier questions and if you find you are really stuck on a question, move on but remember to come back to the question at the end.

Remember: It's not over until its over!

WEEK 5 TASK 1

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Find $\sqrt{1.69}$



6

Write 6324 correct to the nearest thousand

2

Simplify $t \times t$

7

Here are the first 4 terms of a sequence

2 9 16 23

Work out the 10th term of the sequence

3

Write $\frac{4}{50}$ as a percentage

8

Write down the prime number that is between 12 and 16

4

Change 35 cm to mm

9

Here are four numbers:

–9 –2 2 9

Write one of these numbers on each line to make a correct calculation

..... + = –7

5

Work out $10 \times (3 + 5)$

10

Work out $\frac{1}{8}$ of 720



WEEK 5 TASK 2

Estimated completion time = 30 minutes.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1** The table shows the number of books read by four people in one month.

Person	Number of books
Ximena	7
Martha	9
Kezia	1
Tabby	5

- (a) Work out the median number of books.

.....
(2)

- (b) Find the range.

.....
(1)

(Total for Question 1 is 3 mark)

- *2** Jonny wants to know how much coffee he will need for 800 people at a meeting.

Each person who drinks coffee will drink 2 cups of coffee.

10.6 g of coffee is needed for each cup of coffee.

Jonny assumes 68% of the people will drink coffee.

- (a) Using this assumption, work out the amount of coffee Jonny needs.
Give your answer correct to the nearest gram.

..... g
(4)

Jonny's assumption is wrong.
72% of the people will drink coffee.

(b) How does this affect your answer to part (a)?

.....

.....

.....

(1)

(Total for Question 2 is 5 marks)

***3** Simplify $x^5 \times x^8$

.....

(Total for Question 3 is 1 mark)

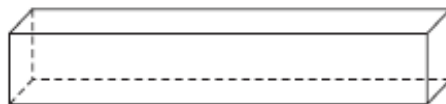
4 A quadrilateral has 4 right angles and 4 sides of equal length.

(a) Write down the mathematical name of this quadrilateral.

.....

(1)

The diagram shows a solid shape.



(b) Write down the mathematical name of this shape.

.....

(1)

(Total for Question 4 is 2 marks)

5 Solve $4(2x - 3) = 20$

$x =$

(Total for Question 5 is 3 marks)

- 6 Blake works 32 hours a week in the UK.
She is paid £473.28 per week.
Blake applies for a job in Australia.
The rate of pay is 26.40 Australian dollars per hour.

£1 = 1.796 Australian dollars

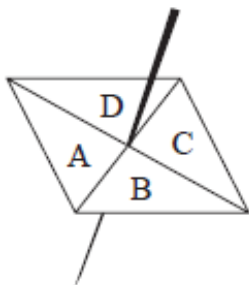
Blake thinks the rate of pay in Australia is greater than the rate of pay in the UK.

Is Blake correct?

You must show how you get your answer.

(Total for Question 6 is 3 marks)

*7 Here is a biased spinner.



The table shows the probabilities that when the spinner is spun it will land on A, on B, on C and on D.

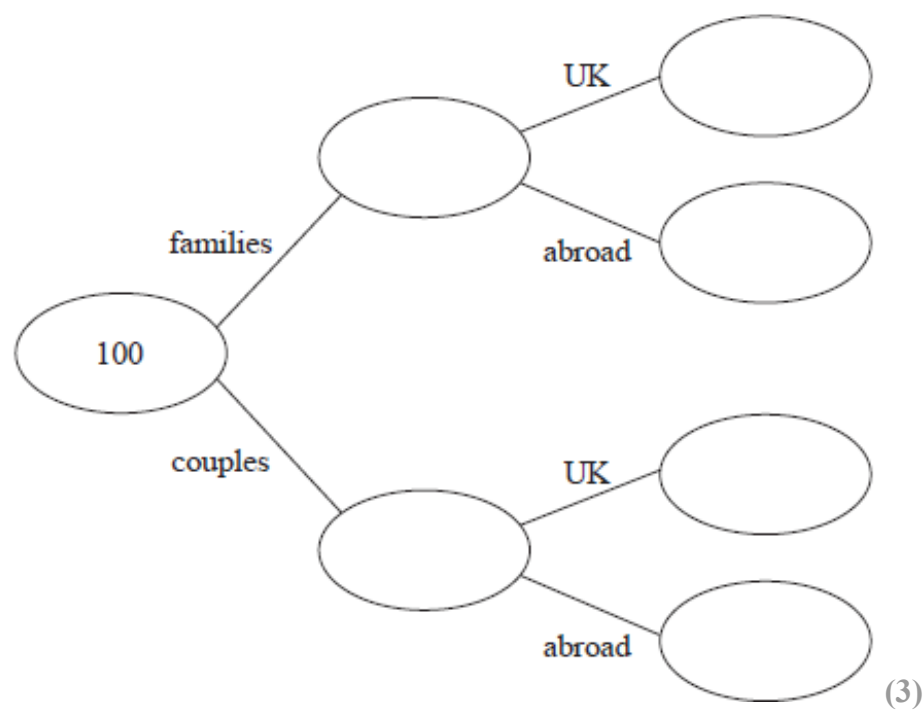
Letter	A	B	C	D
Probability	0.4	0.21	0.32	0.07

Luka will spin the spinner 200 times.
Work out an estimate for the number of times the spinner will land on A.

.....

(Total for Question 7 is 2 marks)

- 8 A travel agent sold 100 holidays in April.
 Each of these holidays was in the UK or was abroad.
- 64 of the 100 holidays were sold to families.
 The rest of the holidays were sold to couples.
- 11 of the 18 holidays abroad were sold to couples.
- (a) Use this information to complete the frequency tree.



- One of the holidays sold to a family is chosen at random.
- (b) Find the probability that this holiday was **not** abroad.

.....
(2)

(Total for Question 8 is 5 marks)

9 (a) Simplify $8h^3 + 14h^3 - 2h^3$

.....
(1)

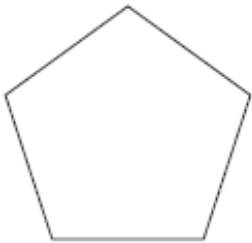
(b) Simplify $(9y + 12y) \div 3$

.....
(1)

(Total for Question 9 is 2 marks)

10 Here is a polygon.

(a) Write down the mathematical name of this polygon.

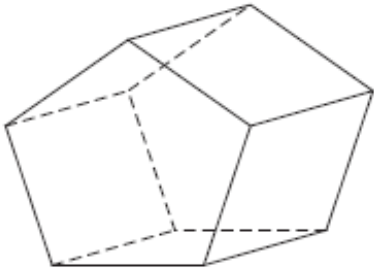


.....
(1)

Here is a prism.

Each edge of the prism has a length of 7.5 cm.

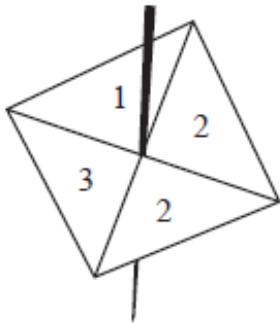
(b) Work out the total length of the edges of the prism.



..... cm
(2)

(Total for Question 10 is 3 marks)

11 Here is a 4-sided spinner.



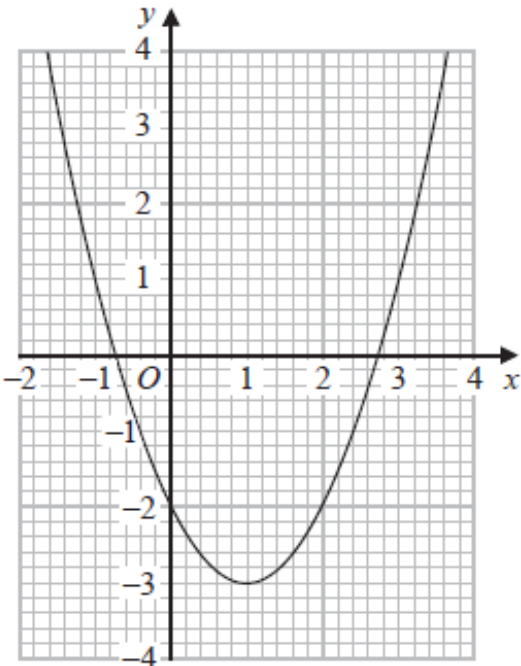
Samina spins the spinner once.

Choose the word that best describes the probability that the spinner lands on 2

impossible	unlikely	evens	likely	certain
------------	----------	-------	--------	---------

.....
(Total for Question 11 is 1 mark)

*12 Here is the graph of $y = x^2 - 2x - 2$



Write down the coordinates of the turning point on the graph of $y = x^2 - 2x - 2$

(..... ,)
(Total for Question 12 is 1 mark)

TOTAL FOR PAPER IS 31 MARKS

WEEK 5 TASK 3

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)



Pearson

1

Write 0.75 as a fraction

6

Write the fraction $\frac{28}{70}$ in its simplest form

2

Change 4 kilometres into metres

7

Write 4.58 correct to 1 decimal place

3

Write 478 to the nearest hundred

8

Write 40% as a decimal

4

Find the value of 6^5



9

Write down the value of the 3 in the number 62 837

5

Here is a list of numbers:

3 4 9 18 27 30 36

From the numbers in the list, write down the cube number

10

Work out $\frac{1}{3}$ of 24



WEEK 5 TASK 4

Estimated completion time = 45 minutes.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 (a) Simplify $\frac{15a}{3}$

.....
(1)

(b) Simplify $19 + 5b + 4c - 7b + c$

.....
(2)

(c) Factorise $8d - 6$

.....
(1)

(Total for Question 1 is 4 marks)

***2** (a) Write 156 as a product of its prime factors.

.....
(2)

(b) Find the highest common factor (HCF) of 156 and 130

.....
(2)

(Total for Question 2 is 4 marks)

***3** Work out $7\frac{3}{8} - 2\frac{1}{2}$

Give your answer as a mixed number.

.....
(Total for Question 3 is 3 marks)

4 Naomi has b bags of apples and c crates of apples.

There are 5 apples in each bag.

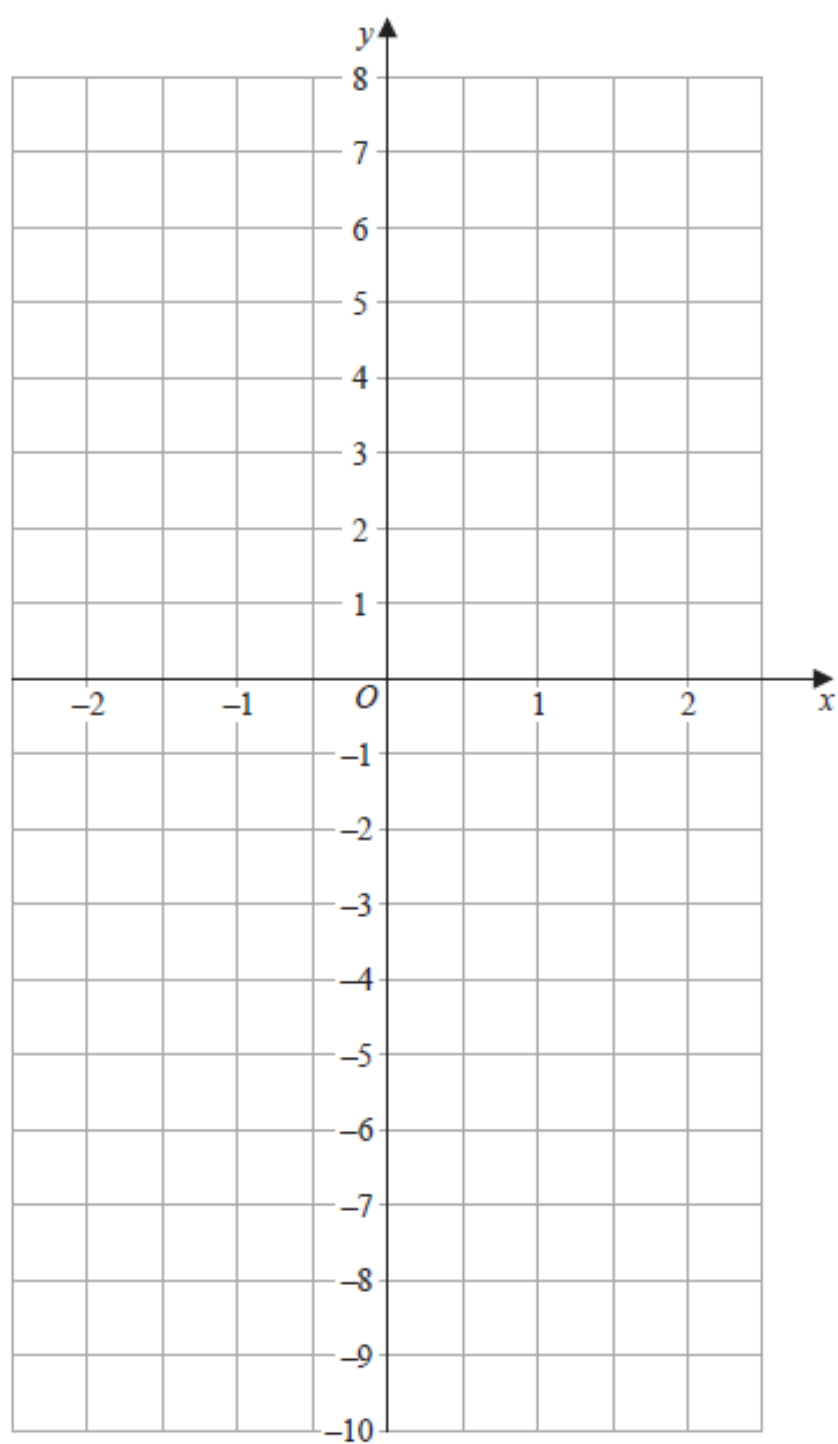
There are 28 apples in each crate.

Naomi has a total of T apples.

Write a formula for T in terms of b and c .

.....
(Total for Question 4 is 3 marks)

5 On the grid, draw the graph of $y = 4x - 1$ for values of x from -2 to 2



(Total for Question 5 is 3 marks)

6 Here are the first five terms of an arithmetic sequence.

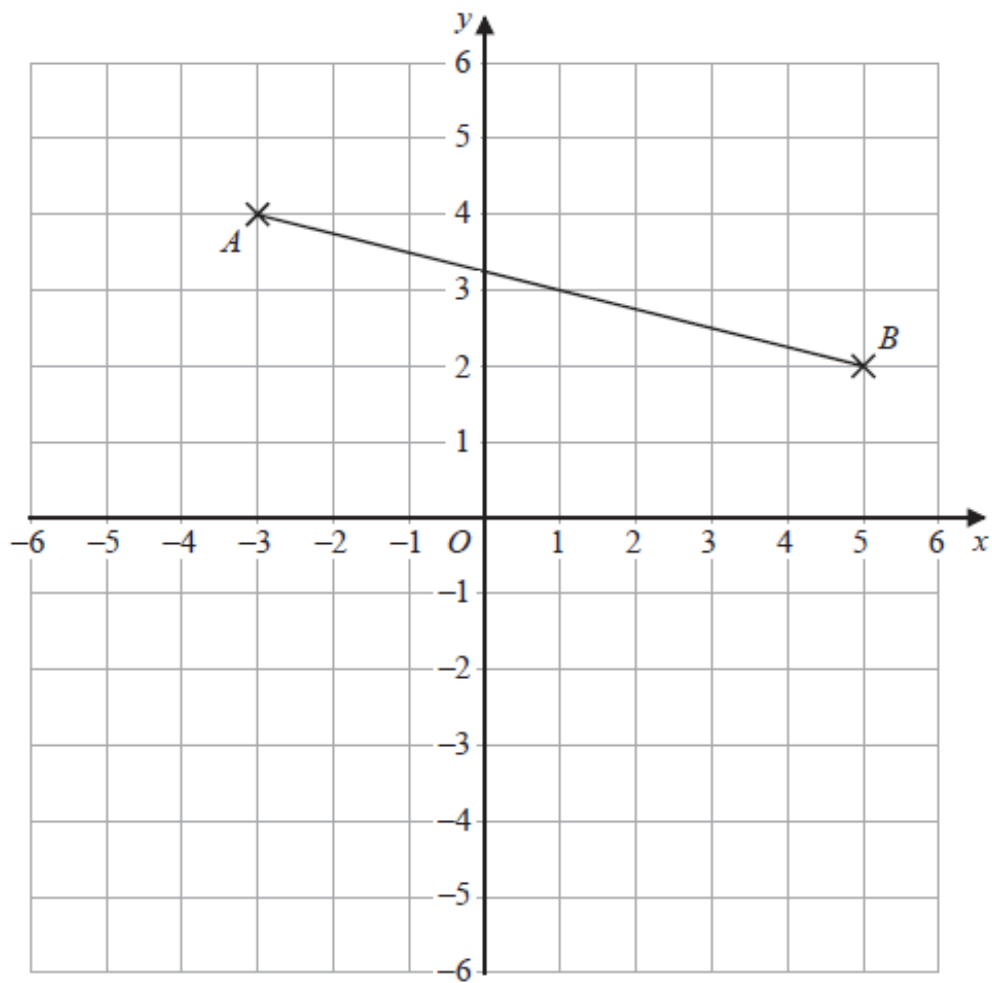
-5 3 11 19 27

Find an expression, in terms of n , for the n th term of this sequence.

.....
(Total for Question 6 is 2 marks)

7 Chloe is making scrunchies.
Chloe has a large number of hair bands.
Each hair band costs 8p.
She buys 100 g of wool for £3
Chloe uses 1 hair band and 5 g of wool to make each scrunchy.
She makes as many scrunchies as she can.
Work out the total cost of each scrunchy that she makes.
Give your answer in pence.

.....p
(Total for Question 7 is 4 marks)



- (a) Write down the coordinates of point B .
(.....,)
(1)
- (b) Plot the point with coordinates $(4, -2)$
Label this point C .
(1)
- (c) Write down the coordinates of the midpoint of AB .
(.....,)
(1)
- (d) Draw the line with equation $y = -4$
(1)

(Total for Question 8 is 4 marks)

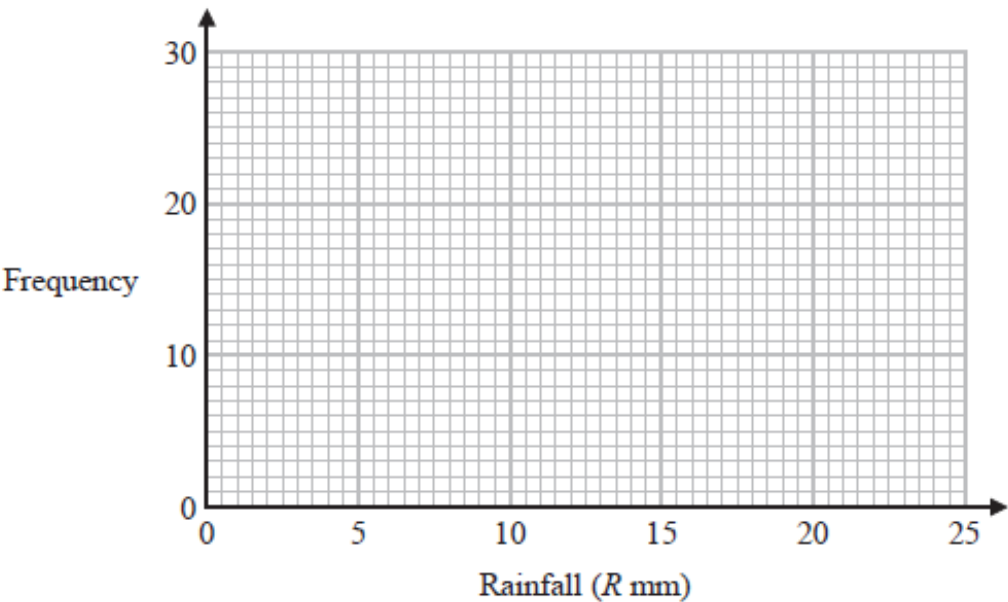
***9** The price of a holiday increases by 20%
This 20% increase adds £240 to the price of the holiday.
Work out the price of the holiday before the increase.

£.....
(Total for Question 9 is 2 marks)

***10** The table shows information about the daily rainfall in a town for 60 days.

Rainfall (R mm)	Frequency
$0 \leq R < 5$	8
$5 \leq R < 10$	24
$10 \leq R < 15$	13
$15 \leq R < 20$	11
$20 \leq R < 25$	4

Draw a frequency polygon for this information.



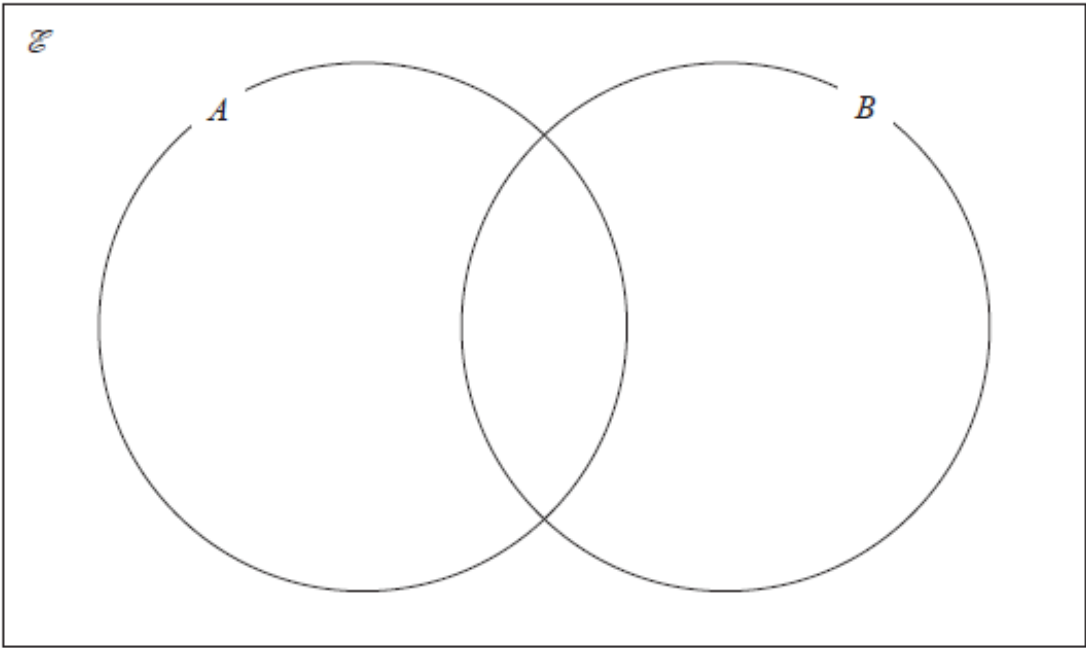
(Total for Question 10 is 2 marks)

*11 $\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

$A = \{\text{odd numbers}\}$

$B = \{\text{square numbers}\}$

(a) Complete the Venn diagram for this information.



(3)

A number is chosen at random from the universal set $\mathcal{E}$

(b) Find the probability that this number is in the set B'

(2)

(Total for Question 11 is 5 marks)

12 A piece of glass has a mass of 27 g and a volume of 10 cm³

Work out the density of the piece of glass.

..... g/cm³

(Total for Question 12 is 2 marks)

***13** Write $\frac{2^5 \times 2^4}{2^3}$ in the form 2^n where n is an integer.

.....
(Total for Question 13 is 2 marks)

14 Work out an estimate for $\frac{5.7 \times 8.2}{0.26}$

.....
(Total for Question 14 is 3 marks)

***15** Work out $8.46 \div 0.15$

.....
(Total for Question 15 is 3 marks)

TOTAL FOR PAPER IS 46 MARKS

WEEK 5 TASK 5

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)

1

Write 29 381 correct to the nearest 100

6

Work out $-9 + 5$

2

Write 45% as a decimal

7

Write the number 8375 correct to the nearest thousand

3

Write 0.1 as a percentage

8

Write a fraction in the box to make the calculation correct

$$1 - \frac{3}{10} =$$

4

Simplify $8a - 3a + 2a$

9

Here are four different digits

8 2 1 6

Put one of these digits in each box to give the smallest possible answer to the sum

You must use each digit only once

		+		
----------------------	----------------------	---	----------------------	----------------------

5

Here is a list of numbers

3 3 3 6 9 9

Write down the mode of the numbers

10

Write $\frac{3}{10}$ as a percentage

WEEK 6 TASKS

Top Examiner Tips for GCSE Maths		
	① Revise all the course content use our revision checklist to help.	② Memorise the formulae. Use our poster to help.
③ Fuel your concentration. Eat properly before the exam and have some water on your desk.	④ Make sure you have the correct equipment listed on the front of the paper.	⑤ Read the question carefully.
⑥ Roughly allow one minute for each mark available.	⑦ Don't forget to show ALL the stages of your working.	⑧ Communicate your responses fully. Use the correct terminology.
⑨ Present and organise your work clearly.	⑩ Check your answers. Does it make sense?	 Pearson

Remember: The exam is your opportunity to “show what you know”!

WEEK 6 TASK 1

One Marker Starters

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(Unless otherwise stated)

1

Simplify $3 \times 4t$

6

Here is a list of numbers:

4 6 9 10 15 27 30 40

From the list, write down all the numbers that are powers of 3

2

Write 31% as a fraction

7

Change 4000 grams into kilograms

3

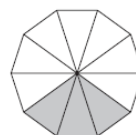
Here are four digits:

3 7 9 5

Write down the largest possible three digit number that can be made with three of the digits

8

What fraction of the shape is shaded?



4

Write down the number that is exactly halfway between 11 and 23

9

Work out $\frac{1}{5}$ of 300

5

Write 0.22 as a percentage

10

Write down two factors of 18



WEEK 6 TASK 2

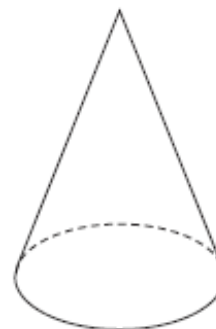
Estimated completion time = 45 minutes.

Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Here is a 3-D shape.



(a) Write down the name of this 3-D shape.

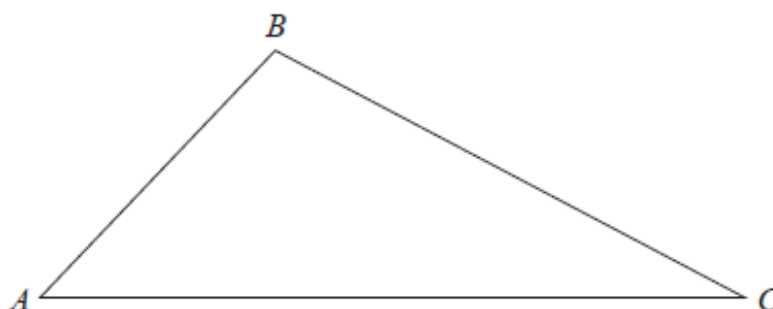
..... (1)

(b) In the space below, draw a sketch of a triangular prism.

(1)

(Total for Question 1 is 2 marks)

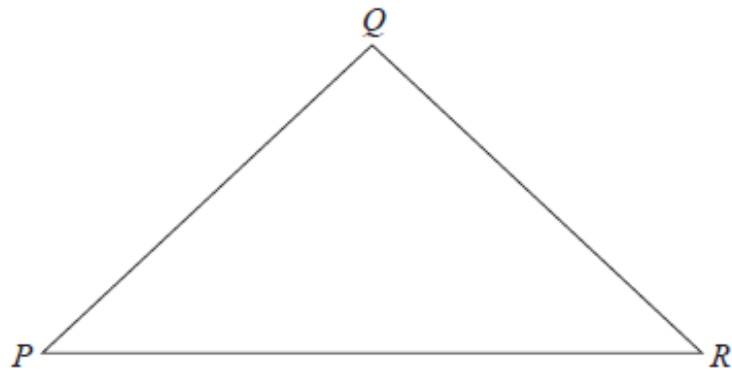
2 Here is a triangle.



(a) Measure the length of AC .

..... cm
(1)

Here is a different triangle.



$$QP = QR$$

(b) Write down the mathematical name of this triangle.

.....
(1)

(Total for Question 2 is 2 marks)

3 240 people work at a factory.

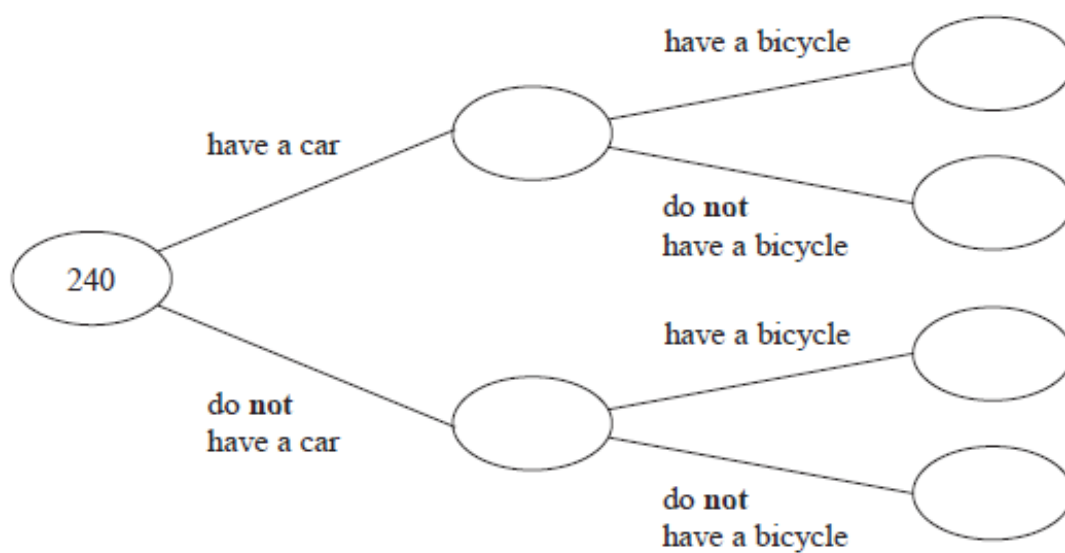
Of these people

150 have a car

110 have a bicycle

65 of the people who have a bicycle do **not** have a car.

(a) Use this information to complete the frequency tree.



(3)

(b) What percentage of the 150 people who have a car also have a bicycle?

..... %
(2)

(Total for Question 3 is 5 marks)

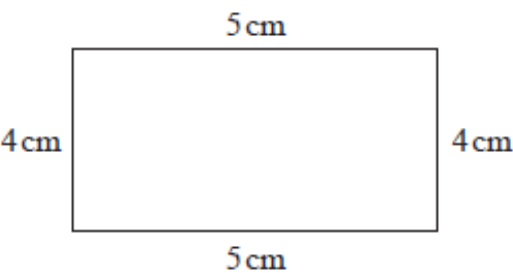
- *4 Last year a family recycled 800 kg of household waste.
57% of this waste was paper and glass.

weight of paper recycled : weight of glass recycled = 12 : 7

Calculate the weight of glass the family recycled.

..... kg
(Total for Question 4 is 3 marks)

5 Milo is trying to find the area of this rectangle.



He writes,

“The area is 400 cm² because $5 \times 4 \times 5 \times 4 = 400$ ”

(a) Explain what is wrong with Milo’s method.

.....

.....

.....

(1)

Anya works out the area of a shape.
Her answer is 86 cm.

(b) Explain why her answer cannot be fully correct.

.....

.....

.....

(1)

(Total for Question 5 is 2 marks)

*6 (a) Expand and simplify $3(2y - 5) + 7(y + 2)$

.....

(2)

(b) Factorise fully $6x^2 + 15x$

.....
(2)

(Total for Question 6 is 4 marks)

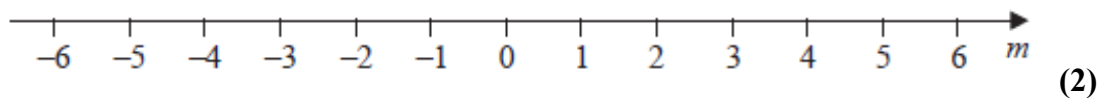
*7 $-2 \leq n < 5$

n is an integer.

(a) Write down the greatest possible value of n .

.....
(1)

(b) On the number line below, show the inequality $-4 \leq m < 1$



(Total for Question 7 is 3 marks)

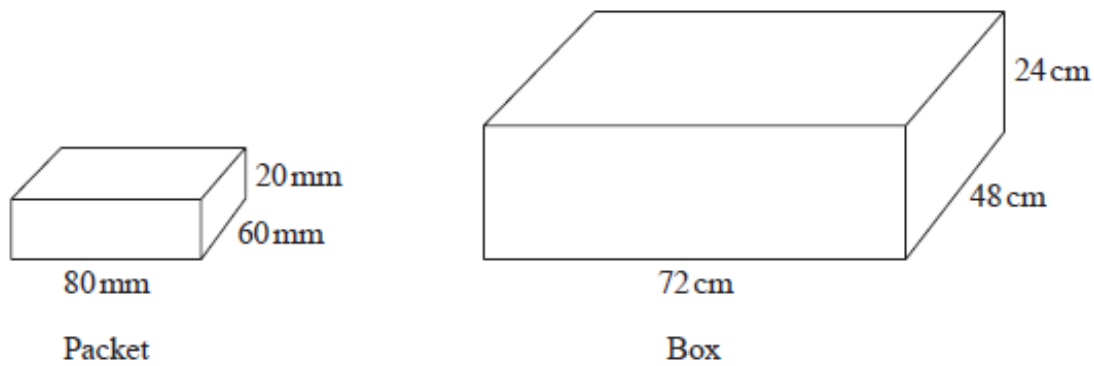
***8** Tamsin buys a house with a value of £150 000
The value of Tamsin’s house increases by 4% each year.
Rachel buys a house with a value of £160 000
The value of Rachel’s house increases by 1.5% each year.
At the end of 2 years, whose house has the greater value?
You must show how you get your answer.

(Total for Question 8 is 4 marks)

9 Paulo drives at an average speed of 56 km / h for 1 hour 45 minutes.
Work out the distance Paulo drives.

..... km
(Total for Question 9 is 3 marks)

10 Packets of sweets are put into boxes.



Each packet is a cuboid, 80 mm by 60 mm by 20 mm.

Each box is a cuboid, 72 cm by 48 cm by 24 cm.

Work out the greatest number of packets that can be put into each box.

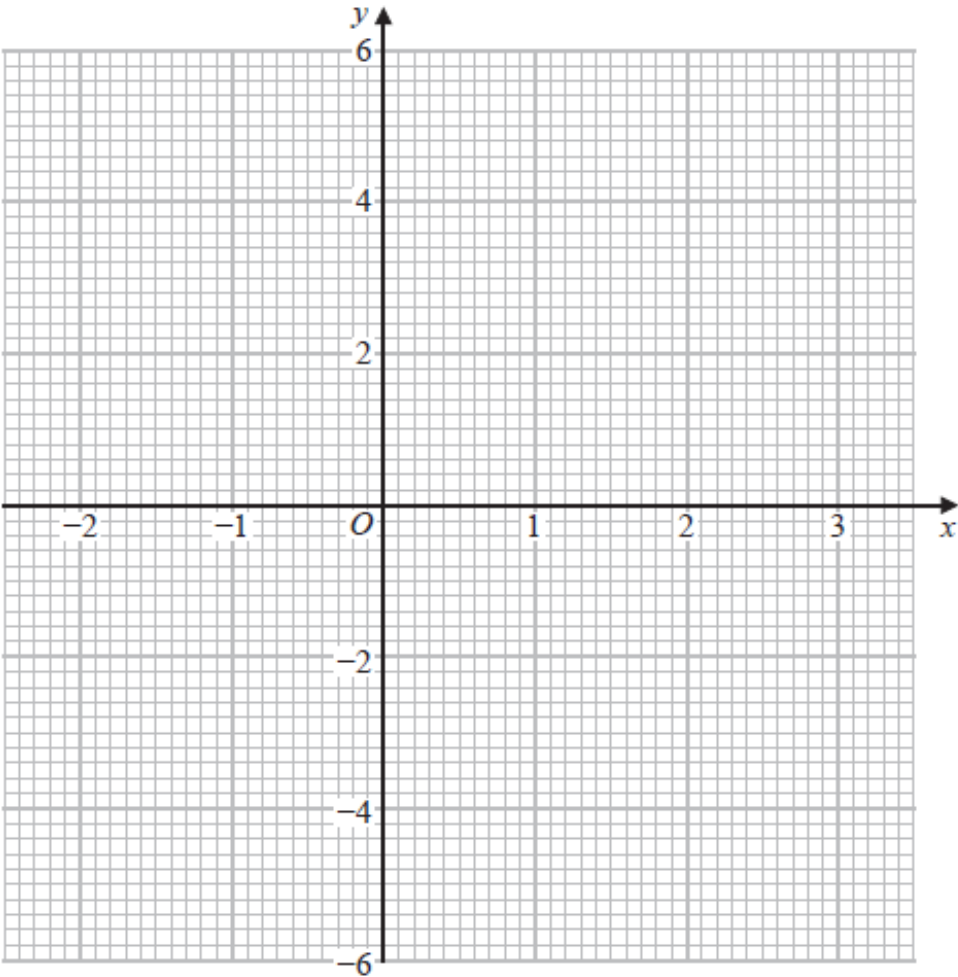
.....
(Total for Question 10 is 4 marks)

11 (a) Complete the table of values for $y = x^2 - x - 2$

x	-2	-1	0	1	2	3
y	4			-2		

(2)

(b) On the grid, draw the graph of $y = x^2 - x - 2$ for values of x from -2 to 3



(2)

(Total for Question 11 is 4 marks)

12 Rima is going to roll a fair 6-sided dice.

Choose the word that best describes the probability that the dice will land on the number 3

impossible	unlikely	evens	likely	certain
------------	----------	-------	--------	---------

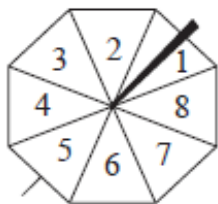
(Total for Question 12 is 1 mark)

***13** Solve $5x - 14 = 52 - x$

$x = \dots\dots\dots$

(Total for Question 13 is 3 marks)

14 Here is a fair ordinary dice and a fair 8-sided spinner.



Charlie throws the dice once and spins the spinner once.

Is Charlie more likely to get

- a number less than 3 on the dice
- or** a number greater than 5 on the spinner?

You must show all your working.

(Total for Question 14 is 3 marks)

***15** Andrew invests £4500 in a savings account for 2 years.
The account pays compound interest at a rate of 3.4% per year.
Calculate how much Andrew has in this savings account at the end of the 2 years.

£.....

(Total for Question 15 is 2 marks)

TOTAL FOR PAPER IS 45 MARKS

WEEK 6 TASK 3

One Marker Starters

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(Unless otherwise stated)



Pearson

1

Simplify $2 \times t \times y \times 9$

6

A quadrilateral has 4 right angles and 4 sides of equal length.

Write down the mathematical name of this quadrilateral

2

Here are the first four terms of a number sequence:

2 5 11 23

The rule to continue this sequence is multiply the previous term by 2 and then add 1

Work out the 5th term of this sequence

7

Write down the value of the 9 in the number 27.963

3

Write $\frac{3}{4}$ as a decimal

8

Write down a number that is less than -5

4

Write the number three thousand one hundred and seven in figures

9

Work out the value of $\sqrt{17.64}$



5

Write 6184 correct to the nearest hundred

10

Change 5570 g into kg



WEEK 6 TASK 4

Estimated completion time = 45 minutes.

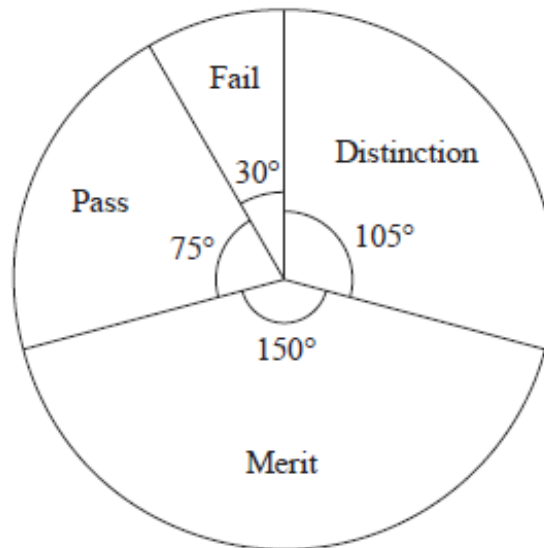
Answer all questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1** Some students took a guitar exam.

The pie chart shows information about the grades the students got.



- (a) Write down the modal grade.

.....
(1)

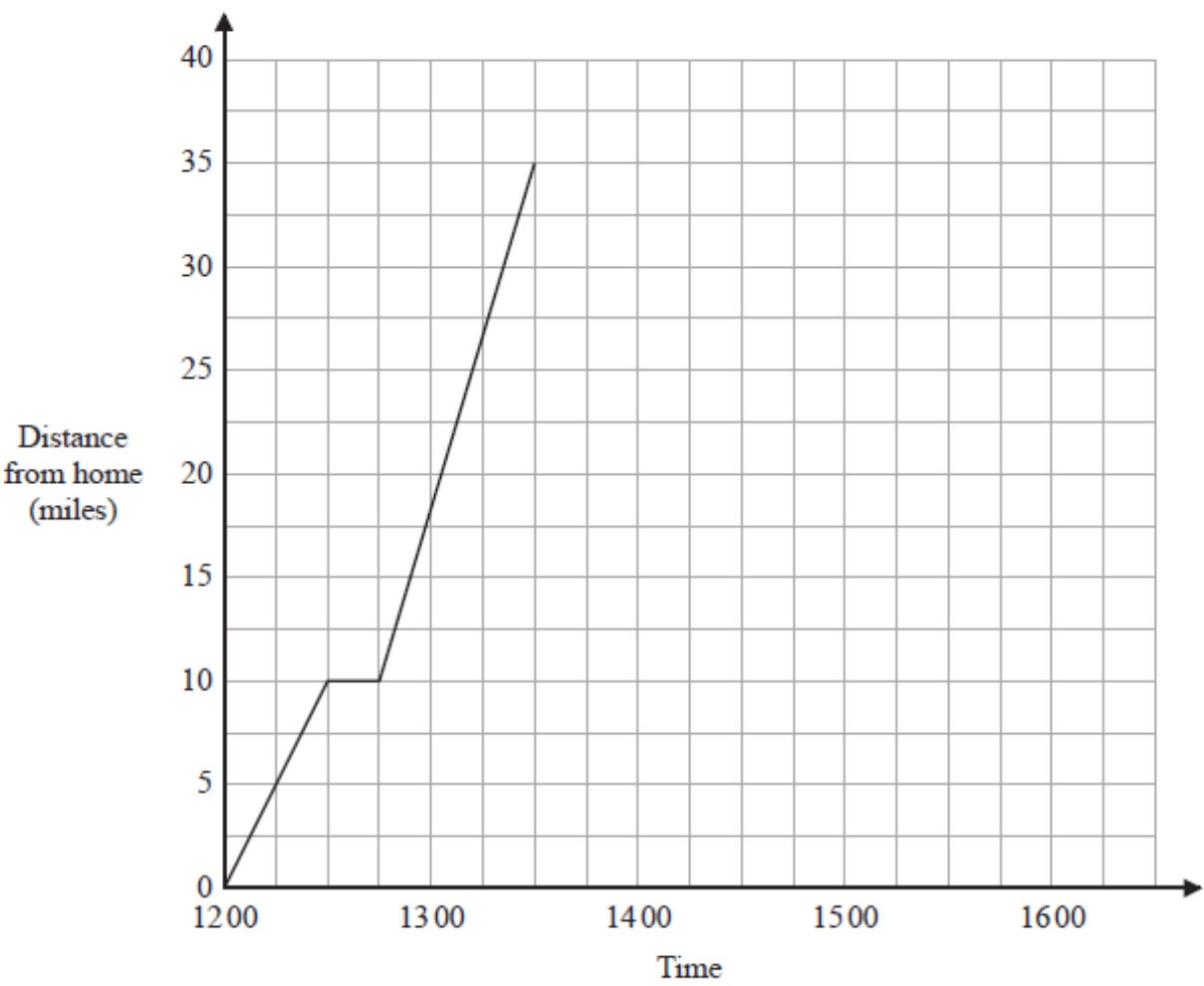
7 students got distinction.

- (b) Work out the total number of students who took the guitar exam.

.....
(3)

(Total for Question 1 is 4 marks)

2 Rowena drove from her home to a beach.
Here is a travel graph for her journey.



Rowena stopped at a cafe on her way to the beach.

(a) (i) How many minutes did Rowena take to drive to the cafe?

..... minutes
(1)

(ii) Write down the distance from Rowena’s home to the cafe.

..... miles
(1)

Rowena stayed at the beach for $1\frac{1}{2}$ hours.

She then drove home without stopping.

Rowena arrived home at 16 00

(b) On the grid, complete the travel graph.

(2)

(c) Work out the average speed for the journey from the beach to Rowena's home.

..... miles per hour

(1)

(Total for Question 2 is 5 marks)

3 Write down the value of the 9 in the number 27.963

.....

(Total for Question 14 is 1 mark)

***4** (a) Simplify $(m^2)^3$

.....

(1)

(b) Simplify $x^5 \times x^8$

.....

(1)

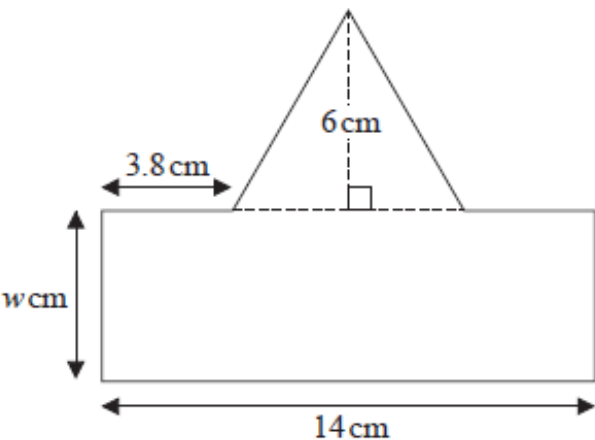
(c) Expand $4p(p^2 + 3p)$

.....

(2)

(Total for Question 3 is 4 marks)

5 Here is a shape made from a rectangle and a triangle.



The shape has exactly one line of symmetry.

The area of the rectangle is 3.5 times the area of the triangle.

The width of the rectangle is w cm.

Work out the value of w .

You must show all your working.

$w =$

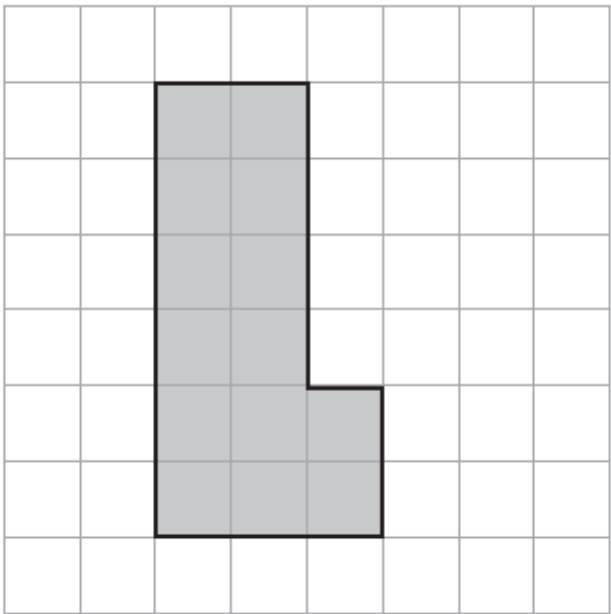
(Total for Question 4 is 5 marks)

6 Solve $\frac{x}{7} + 9 = 4$

$x =$

(Total for Question 5 is 2 marks)

7 The diagram shows a shape on a centimetre grid.



(a) Find the area of the shape.

..... cm²
(1)

(b) Find the perimeter of the shape.

..... cm
(1)

(Total for Question 6 is 2 marks)

*8 (a) Write 468 000 in standard form.

.....
(1)

(b) Write 5.037×10^{-4} as an ordinary number.

.....
(1)

(Total for Question 7 is 2 marks)

***9** Riley travelled by car and by aeroplane.
He travelled 143 miles by car at an average speed of 55 miles per hour.
Riley then travelled for 5 hours and 20 minutes by aeroplane.
Work out, in hours and minutes, Riley’s total travelling time.

..... hours minutes

(Total for Question 8 is 3 marks)

10 The diagram shows the position of town T .



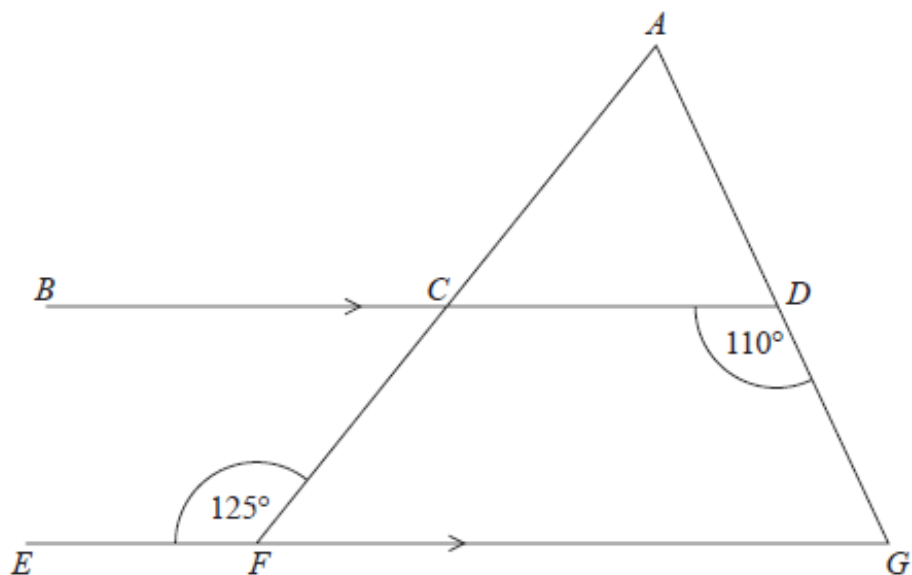
Town R is 55 km from town T on a bearing of 065°

Mark the position of town R with a cross ($\times$).

Use a scale of 1 cm to 10 km.

(Total for Question 9 is 2 marks)

- *11** ACF and ADG are straight lines.
 BCD and EFG are parallel lines.



Show that triangle ACD is isosceles.
Give a reason for each stage of your working.

(Total for Question 10 is 5 marks)

- *12** A company orders a large number of plates from a factory.
It would take 30 hours to make all the plates using 4 machines.
How many machines are needed to make all the plates in 6 hours?

.....
(Total for Question 11 is 2 marks)

- 13** Write $(9 \times 10^4) : (4.5 \times 10^6)$ in the form $1 : n$ where n is an integer.

.....
(2)

(Total for Question 12 is 2 marks)

- *14** A solid cuboid is made of metal.
The metal has a density of 9 g/cm^3
The volume of the cuboid is 72 cm^3
Work out the mass of the cuboid.

..... g
(Total for Question 13 is 2 marks)

15 Jenny invests £3000 for 6 years at $y\%$ simple interest per year.
At the end of the 6 years, Jenny has received a total of £450 in interest.
Work out the value of y .

$y = \dots\dots\dots$

(Total for Question 15 is 3 marks)

TOTAL FOR PAPER IS 44 MARKS

WEEK 6 TASK 5

One Marker Starters

Includes Summer 2017 – Summer 2024 Exam Papers



(Unless otherwise stated)



Pearson

1

Work out the value of 2^4

6

Change 5000 millilitres to litres

2

Simplify $12p \div 4$

7

Write the number 18 475 correct to the nearest thousand

3

Write down a prime number that is between 20 and 30

8

Here are the first 4 terms of a sequence

2 9 16 23

Write down the next term and explain how you got your answer

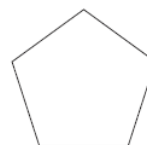
4

Work out

$$2 \times 7 + 10$$

9

Here is a polygon



Write down the mathematical name of this polygon

5

Write 0.3 as a percentage

10

Here is a list of numbers

2 4 4 7 8

Work out the range of these numbers