edexcel

Pearson Edexcel Level 2 Certificate in Essential Skills – Application of Number (Northern Ireland)

Sample Assessment Material – Question Paper

September 2016

Edexcel, BTEC and LCCI qualifications

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Surname	Other names
Centre Number	Centre Number Candidate Number

Pearson Edexcel Level 2 Certificate in Essential Skills – Application of Number

Sample Assessment Material	Paper Reference
Time: 1 hour 30 minutes	
You must have: Pen, calculator, HB pencil, eraser, ruler graduated in cm and mm, protractor, pair of compasses.	Total Marks **50**

Signature: _____

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** the questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need*.
- **Calculators may be used.**

Information

- The total mark for this paper is 50.
- The marks for each question are shown in brackets
  – *use this as a guide to how much time to spend on each question.*
- **You must show clearly how you get your answers because marks will be awarded for your working out.**
- **Check you working and your answers at each stage.**

•**This sign shows where marks will be awarded for showing your check.**

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.

Turn over

SECTION A: Business trip

Answer all questions in this section.

Write your answers in the spaces provided.

1 Anita is the Country Manager of a chain of shops.
She needs to rent a car for a business trip.

It will cost £16.53 to rent a car for 1 day.
Anita needs the car for 5 days.

She can pay part of the cost of renting the car using loyalty points.
Anita has 5847 loyalty points.
She wants to use as many points as possible.

Anita knows that for every 500 points she gets £2.50 off the cost of renting a car.

She thinks she will need to pay less than £50 to rent a car for 5 days.

Use the box below to show your working and your answer.

Anita will travel 240 miles in the rental car during her trip.

She is told

''The rental car uses 1 gallon of petrol for every 53.1 miles travelled''

Anita knows that 1 gallon is 4.546 litres.
She thinks she will need less than 20 litres of petrol for her trip of 240 miles.

Use the box below to show your working and your answer.

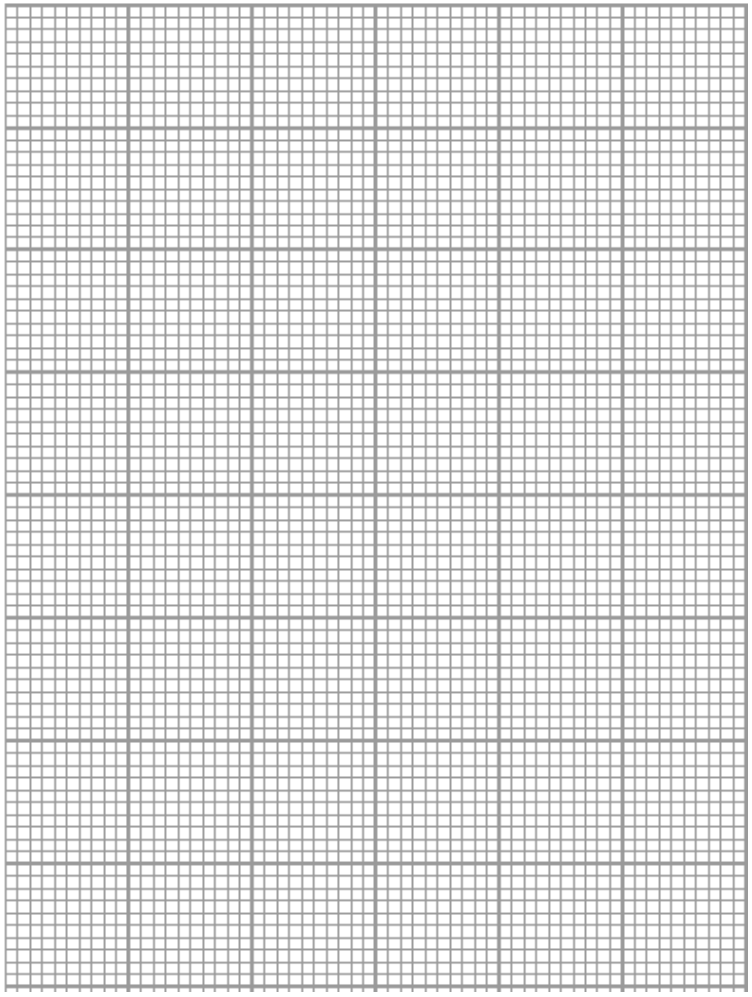
☑ Show your check in the box below.

(Total for Question 1 is 9 marks)

2 Anita prepares for a business meeting.
She has this information about the number of sales for two products in the last 3 months.

Product	Jan	Feb	Mar
A	4750	3620	5440
B	3160	4580	6310

Anita wants to compare these products using a graph.



Anita has this data about the income from sales in four counties.

	Income in millions of pounds				
Year	**Antrim**	**Down**	**Tyrone**	**Fermanagh**	**Total**
2013	1.45	1.23	0.64	0.39	3.71
2014	1.89	1.47	0.88	0.46	4.7
2015	2.03	1.49	0.91	0.67	5.1

Anita writes down this statement for the meeting.

[please insert house style fraction]

Use the box below to show your working and your answer.

(Total for Question 2 is 6 marks)

3 Anita visits one of the shops in County Antrim.

She collects this information from the staff who work in the shop

- their rating of the manager (excellent / good / poor)
- their length of employment at the shop (less than 1 year / 1 year or more)
- their gender (male / female).

This is the information Anita collects from the staff.

Rating	**Length of employment**	**Gender**
excellent	less than 1 year	Male
excellent	1 year or more	Male
good	1 year or more	Female
good	less than 1 year	Female
excellent	less than 1 year	Female
good	less than 1 year	Male
good	1 year or more	Female
good	less than 1 year	Male
excellent	1 year or more	Male
poor	less than 1 year	Male
poor	1 year or more	Female
excellent	1 year or more	Female
good	1 year or more	Female

Anita wants to summarise these results in a table.
She wants to separate the data by rating, length of employment and gender.

Use the next page to show your table.

Use the box below to show your summary table.

Anita looks at the income in a shop over the last 4 quarters.

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Income	£127 500	£114 900	£123 400	£144 400

Anita knows that the average quarterly income for the shops in this county was £126 875

She thinks this shop had a higher quarterly income than the county average.

(b) Is Anita correct?
Show why you think this. **(2)**

Use the box below to show your working and your answer.

(Total for Question 3 is 6 marks)

4 Anita looks at the design of a new container.

The container is in the shape of a cuboid.
The capacity of the container will be printed on the labels.

She wants to know the capacity of the box, in litres, to put on a label.

1 litre = 1000 cm^3

Use the box below to show your working and your answer.

Show your check in the box below

(Total for Question 4 is 4 marks)

SECTION B: Home improvements

Answer all questions in this section.

Write your answers in the spaces provided.

5 Thomas wants to make some home improvements.
He applies for a loan from his bank to pay for the improvements.

Thomas wants to repay the loan and the interest on the loan over 3 years.
He will repay the same amount each month.

The bank manager uses this formula to work out the total amount, loan and interest, that Thomas will need to repay.

Thomas wants a loan of £10 000

He can afford to repay £310 each month.

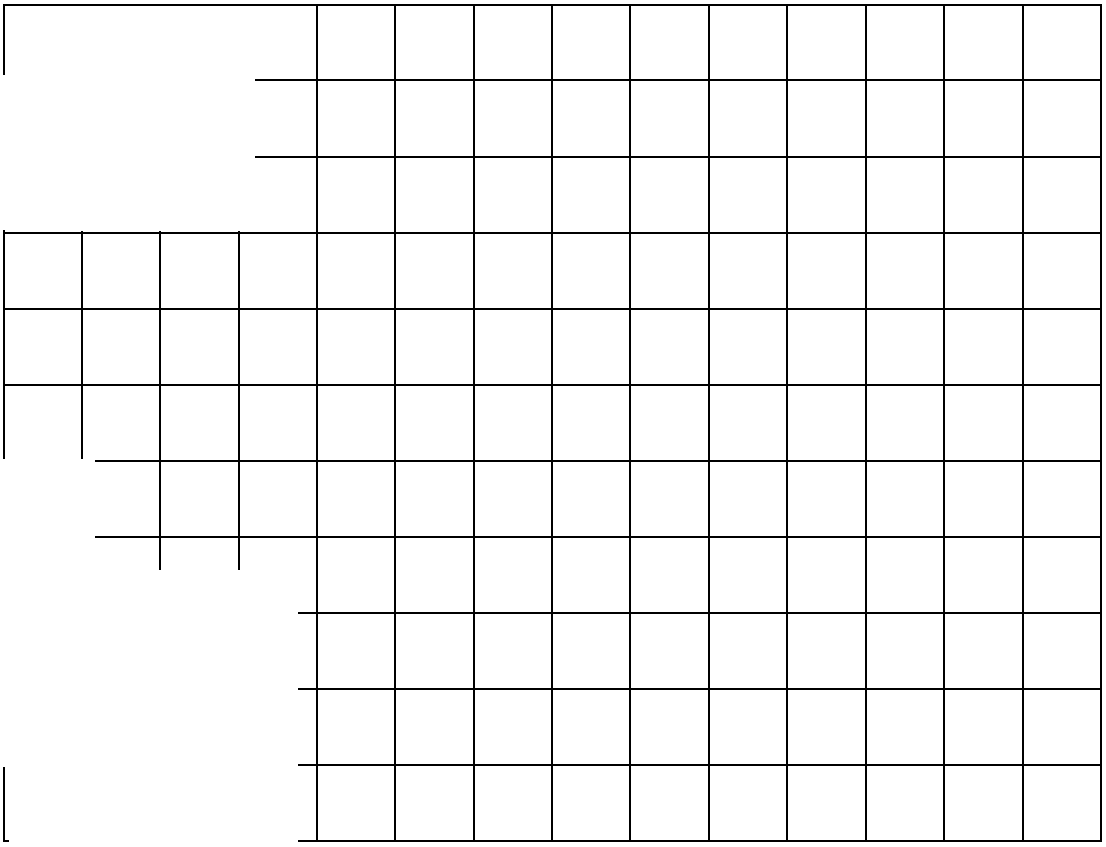
Use the box below to show your working and your answer.

(Total for Question 5 is 5 marks)

6 Thomas wants to put a new bath in his bathroom.
This is a sketch of the space needed for the new bath.

The bath needs to be at least 50 cm from the sink and at least 100 cm from the door.
It also needs to completely cover the space where the water pipes are.

Thomas draws a plan of his bathroom on a grid for the plumber.



Thomas also needs to buy a new extractor fan for his bathroom.
He wants his extractor fan to have

- power of at least 8 watts
- profile depth between 85 mm and 120 mm
- diameter between 95 mm and 110 mm.

He wants to spend as little as possible.

Thomas finds this information about some extractor fans.

Extractor fan	Price	Power in watts	Profile depth in mm	Diameter in mm
A	£121.64	21	275	100
B	£89.59	8	110	100
C	£79.99	7.5	75	100
D	£149.26	21	67	163
E	£93.49	8	95	150

Show your answer by ticking the correct box below.

A B C D E

Thomas will use a 15% off the price voucher to buy the fan.

Use the box below to show your working and your answer.

(Total for Question 6 is 8 marks)

7 Thomas is planning to do some work in his garden next week.

He checks the weather forecast for the next 6 days.

	Mon	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
Forecast	sunny	partly sunny	overcast	cloudy	overcast	cloudy
Temperature (°F)	74	72	68	68	69	70
Probability of rain (%)	18	21	35	27	30	40

Use the box below to show your working and your answer.

Thomas needs to do these jobs in his garden on Thursday.

- Plant 6 cherry trees – 12 minutes each
- Mow the lawn – 25 minutes
- Paint the fence – three quarters of an hour
- Fix the shed – 2.5 hours

Thomas wants to start his jobs in the garden at 9.00 am.
He thinks he will finish them by 2.00 pm.

Use the box below to show your working and your answer..

(Total for Question 7 is 6 marks)

8 Thomas wants to put wooden floorboards on his living room floor.
The floor is a rectangle 3.75 m by 4.9 m.

The wooden floorboards are sold in packs.
Thomas finds this offer.

[typesetters please insert house style fraction]

Thomas thinks it will cost him less than £530 to buy enough floorboards to cover his living room floor.

Use the box below to show your working and your answer.

☑ Show your check in the box below.

(Total for Question 8 is 6 marks)
TOTAL FOR PAPER IS 50 MARKS

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