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**Pearson Edexcel
Functional Skills**

Centre Number

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Mathematics

Level 1



9 – 13 May 2016

Time: 1 hour 30 minutes

Paper Reference

FSM01/01

You must have:

Pen, calculator, HB pencil, eraser, ruler graduated in cm and mm, protractor, compasses.

Total Marks

| |
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| |
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My signature confirms that I will not discuss the content of the test with anyone until the end of the 5 day test window.

Signature: _____

Instructions

- Use a **black** ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Sign the declaration.
- Answer **all** 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 48.
- The marks for each question are shown in brackets – *use this as a guide as 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 your 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 ►

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PEARSON

SECTION A: Charity fun day

Answer all questions in this section.

Write your answers in the spaces provided.

- 1** Keeley is organising a fun day to raise money for charity. She has set herself a target.

The target is to raise more money this year than the average amount raised for the last 4 years.

Keeley thinks if she raises £900 she will reach this target.

The table shows the amount of money raised for the last 4 years.

| Year | 2012 | 2013 | 2014 | 2015 |
|--------------------------|-------------|-------------|-------------|-------------|
| Amount raised (£) | 762 | 864 | 1012 | 968 |

- (a) Is £900 enough to reach the target?
Show why you think this.

(3)

Use the box below to show clearly how you get your answer.

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Keeley is going to charge these admission prices for the fun day.

Keeley says

The family ticket is a saving of £2 for a family of 2 adults and 2 children.

| Admission prices | |
|--|-------|
| Adult | £2.50 |
| Child (under 16) | £1.30 |
| Family ticket (2 adults and 2 children) | £6 |

(b) Is Keeley correct?
Show why you think this.
Show a check of your working.

(4)

Use the box below to show clearly how you get your answer.

Write your check in the box below.



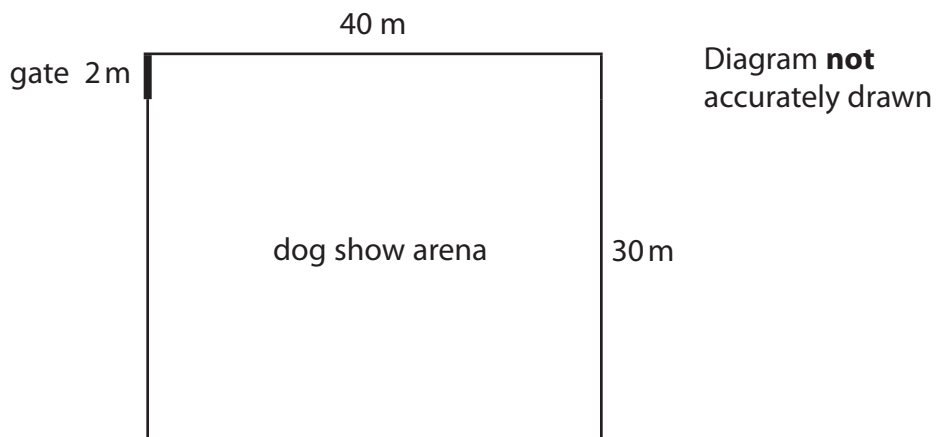
(Total for Question 1 is 7 marks)



2 There is a dog show at the fun day.

Mitch wants to put barrier fencing around the dog show arena.
He needs to leave a 2 m space for a gate.

The dog show arena is rectangular with length 40 m and width 30 m.



Mitch has 6 rolls of barrier fencing.
Each roll is 25 m long.

The barrier fencing can be cut and joined together.

(a) Has Mitch got enough barrier fencing for the arena?

(3)

Use the box below to show clearly how you get your answer.

Empty box for showing the solution.

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There is a lucky dip for children at the fun day.
Each child who has a go on the lucky dip wins a prize.

There are a total of 18 prizes.

The prizes are

- 3 colouring books
- 2 pencil cases
- 9 bars of chocolate
- 4 packets of sweets.

Danny is the first child to have a go on the lucky dip.

(b) What is the likelihood that Danny wins a bar of chocolate?

(1)

Tick ✓ a box to show your answer.

| | |
|-------------|--------------------------|
| impossible | <input type="checkbox"/> |
| unlikely | <input type="checkbox"/> |
| even chance | <input type="checkbox"/> |
| likely | <input type="checkbox"/> |
| certain | <input type="checkbox"/> |

(Total for Question 2 is 4 marks)



3 Josh makes burgers to sell at the fun day.
He has this list of ingredients for burgers.
Josh wants to make a batch of 20 burgers.

Makes 4 burgers
500 g mince
1 tbsp vegetable oil
1 egg

(a) What weight of mince does Josh need to make 20 burgers? (3)

Use the box below to show clearly how you get your answer.

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There is a bouncy castle at the fun day.
The safety rule says.

Bouncy castle
1 adult for every 5 children

30 children can go on this bouncy castle.

(b) How many adults are needed for 30 children to safely use the bouncy castle?
Show why you think this. (2)

Use the box below to show clearly how you get your answer.

(Total for Question 3 is 5 marks)

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SECTION B: The plumber

Answer all questions in this section.

Write your answers in the spaces provided.

- 4 Pete is a plumber.
He has 5 jobs to do on Monday.

| Customer | Job | Time allowed | Time of day |
|------------|----------------------|----------------------|-------------|
| Mrs Green | fit new toilet | $1\frac{1}{2}$ hours | before 3 pm |
| Denny | reseal bath | 30 minutes | anytime |
| Mr Khalid | fix burst water pipe | 2 hours | afternoon |
| Remi | replace mixer tap | 1 hour 15 minutes | morning |
| Miss Baker | mend leaking tap | $\frac{3}{4}$ hour | anytime |

Pete wants to

- start his first job at 8 am
- allow at least 20 minutes travelling time between jobs
- finish his last job by 5.30 pm.

During the day Pete will stop for 1 hour to have his lunch.

- (a) Make a time plan for Pete.
Show the start and finish time for each job.
Remember to check your answer.

(5)

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Write your time plan in the box below.

A large, empty rectangular box with rounded corners, intended for writing a time plan.

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Pete is going to charge £110 + VAT to fix the burst water pipe.

VAT is charged at 20% of the price of the job.

(b) Work out 20% of £110 for Pete.

(2)

Use the box below to show clearly how you get your answer.

(Total for Question 4 is 7 marks)

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- 5 Pete is going to service a heating system on Wednesday.
He needs to buy some sludge remover.

Pete sees these two offers.

Offer 1

Sludge remover
500 ml bottle
Buy 1 for £7.45

Offer 2

Sludge remover
500 ml bottle
Buy 6 for £45.72

Pete needs to buy 6 bottles of sludge remover.
He wants to pay the least amount of money.

- (a) Which offer should Pete choose?
Show why you think this.

(2)

Use the box below to show clearly how you get your answer.

Empty box for showing the answer.



Pete needs to use some insulation pipe for the heating system.

Insulation pipe is sold in 1000 mm lengths.
Pete has 1 length of insulation pipe.



He needs to cut 3 pieces of pipe each with length 35 cm.

(b) Has Pete got enough insulation pipe to cut the 3 pieces?
Show why you think this.

(3)

Use the box below to show clearly how you get your answer.

(Total for Question 5 is 5 marks)

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6 Pete wants to employ Amy as a newly qualified plumber.

Pete tells Amy

I will pay £10.65 an hour for a 35-hour week, working Monday to Friday.

Amy has been offered a different job with Jensen plumbers. Jensen plumbers will pay £72 a day, working Monday to Friday.

Amy wants to take the job that pays the most money.

Which job will pay Amy the most money?
Show a check of your working.

(4)

Use the box below to show clearly how you get your answer.

Write your check in the box below.



(Total for Question 6 is 4 marks)



SECTION C: A new flat

Answer all questions in this section.

Write your answers in the spaces provided.

- 7 Liz has moved into a new flat.
She wants to have these 3 walls of the bedroom painted.



Liz has 3 tins of paint.
1 tin of paint covers 13 m^2 .

- (a) Does Liz have enough paint to cover the 3 walls?
Show why you think this.

(4)

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Use the box below to show clearly how you get your answer.



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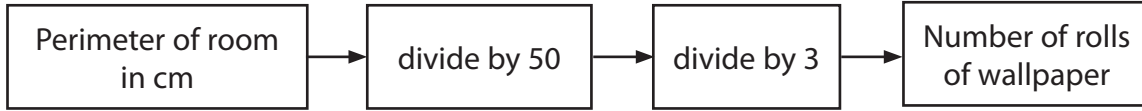
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Ged is a decorator.

He is going to put wallpaper on the walls in the living room for Liz.

Ged uses this rule to work out how many rolls of wallpaper he needs.



Ged knows the perimeter of the room is 1800 cm.

He works out he will need 11 rolls of wallpaper.

(b) Is Ged correct?
Show why you think this.

(3)

Use the box below to show clearly how you get your answer.

(Total for Question 7 is 7 marks)

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8 Liz is going to buy a new bed.

She sees this poster in a shop.

Bed

normal price £348.99

discount this week only

$\frac{1}{3}$ off normal price

Liz is going to buy the bed this week.

(a) How much money will Liz save with the discount?

(2)

Use the box below to show clearly how you get your answer.



Liz is going to buy a wardrobe.

She pays a deposit of £47

Liz also needs to pay 12 monthly payments of £25

(b) How much will Liz pay in total for the wardrobe?
Show a check of your working.

(4)

Use the box below to show clearly how you get your answer.

Write your check in the box below.



(Total for Question 8 is 6 marks)

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9 Liz wants to work out where to put a bed and a wardrobe in her daughter's bedroom.

The bed needs a rectangular space 2 m by 1 m.
It must be in a corner of the room.

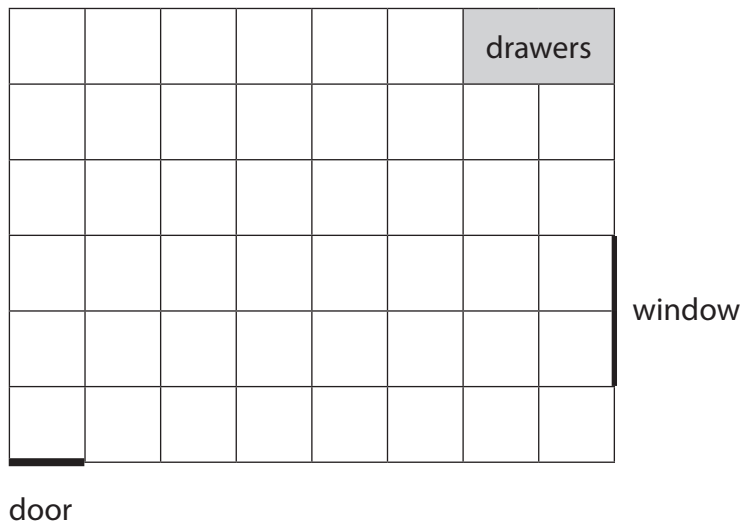
The wardrobe needs a rectangular space 2 m by $\frac{1}{2}$ m.

The longest side must be against a wall.

Liz draws a plan of the bedroom on a grid.

Draw a space for the bed and a space for the wardrobe on the grid.

(3)



Key: 1 square on the grid is 50 cm by 50 cm in the room

(Total for Question 9 is 3 marks)

TOTAL FOR PAPER IS 48 MARKS



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