

Centre No.								Paper Reference	Surname <i>Correchia</i>	Initial(s)
Candidate No.								1 3 8 0 / 1 F	Signature <i>Mr M Semar</i>	

Paper Reference(s)

1380/1F

Edexcel GCSE

Mathematics (Linear) – 1380

Paper 1 (Non-Calculator)

Foundation Tier

Monday 7 June 2010 – Afternoon

Time: 1 hour 30 minutes



Examiner's use only

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Team Leader's use only

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Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers

Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature. Check that you have the correct question paper.

Answer ALL the questions. Write your answers in the spaces provided in this question paper.

You must NOT write on the formulae page.

Anything you write on the formulae page will gain NO credit.

If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. (2).

There are 28 questions in this question paper. The total mark for this paper is 100.

There are 24 pages in this question paper. Any blank pages are indicated.

Calculators must not be used.

Advice to Candidates

Show all stages in any calculations.

Work steadily through the paper. Do not spend too long on one question.

If you cannot answer a question, leave it and attempt the next one.

Return at the end to those you have left out.

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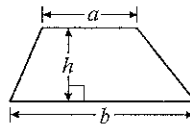
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GCSE Mathematics (Linear) 1380

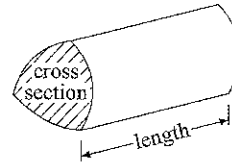
Formulae: Foundation Tier

You must not write on this formulae page.
Anything you write on this formulae page will gain NO credit.

Area of trapezium = $\frac{1}{2}(a+b)h$



Volume of prism = area of cross section \times length



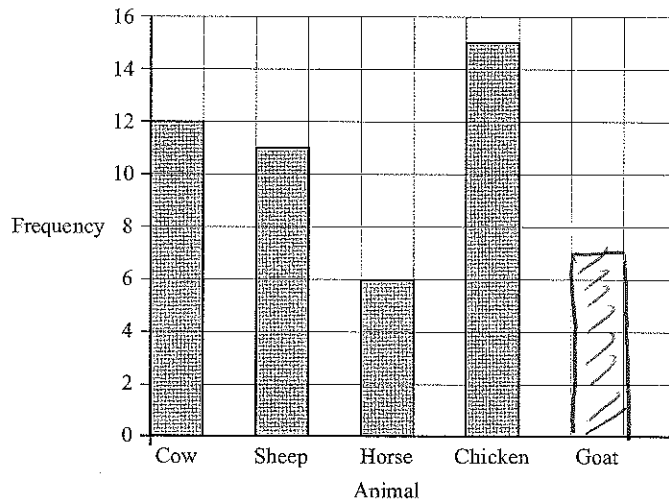
Answer ALL TWENTY EIGHT questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1. The bar chart gives information about the numbers of cows, sheep, horses and chickens on a farm.



- (a) Write down the number of horses on the farm.

6
.....
(1)

- (b) Write down the number of sheep on the farm.

11
.....
(1)

There are also 7 goats on the farm.

- (c) Use this information to complete the bar chart.

(1)

Q1

(Total 3 marks)



Leave blank

2. (a) Write the number **fifteen thousand, six hundred and seventy two** in figures.

15672
(1)

- (b) Write the number 3020 in words.

Three thousand and twenty
(1)

- (c) Write the number 8196 to the nearest hundred.

8196 8200
(1)

- (d) Write down the value of the 6 in the number 236 894

6000
(1)

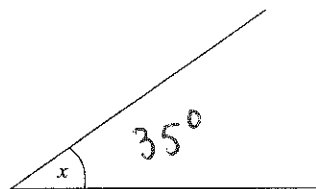
Q2

(Total 4 marks)

3. (a) Measure the length of PQ .
Give your answer in centimetres.

P ————— Q

4.5 cm
(1)



- (b) Measure the size of angle x .

35 °
(1)

- (c) What type of angle is angle x ?

acute
(1)

Q3

(Total 3 marks)



Leave blank

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

(a) 7, -2, -6, 1, -3

-6 -3 -2 1 7

(1)

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

(b) 0.06, 0.35, 0.63, 0.3, 0.56

0.06 0.3 0.35 0.56 0.63

(1)

(Total 2 marks)

Q4

5. Kunal goes to a café.
He can choose one drink and one snack.

Drinks
Milk
Juice
Water

Snacks
Apple
Sandwich
Biscuit

One possible combination is (Milk, Apple).
Write down all the possible combinations Kunal can choose.
The first one has been done for you.

(M, A) (M, S) (M, B) (J, A)
..... (J, S) (J, B) (W, A)
..... (W, S) (W, B)

(Total 2 marks)

Q5



5
Turn over

6. Here are some patterns made from sticks.



Pattern number 1



Pattern number 2



Pattern number 3

(a) In the space below, draw Pattern number 4



(1)

(b) Complete the table.

Pattern number	1	2	3	4	5
Number of sticks	3	5	7	9	11

(1)

(c) How many sticks are in Pattern number 12?

$$3 = 1 \times 2 + 1$$

$$5 = 2 \times 2 + 1$$

$$2 \times 12 + 1$$

25

(1)

Ben wants to find the number of sticks in Pattern number 100.

(d) Write down a method he could use.

..... $Pattern\ Number \times 2 + 1$

..... $1 \times 2 + 1 = 3$

..... $2 \times 2 + 1 = 5$

..... $3 \times 2 + 1 = 7$

..... $100 \times 2 + 1 = 201$

(1)

Q6

(Total 4 marks)



7. Here is a list of 8 numbers.

4 7 10 16 18 20 21 32

From the numbers in the list write down a number that is

(i) an odd number

7

(ii) a multiple of 5

10

(iii) a square number $4^2 = 16$

16

(iv) a factor of 42

$$42 = 21 \times 2$$

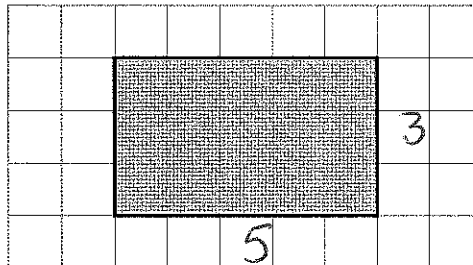
21

(Total 4 marks)

Leave blank

Q7

8. The diagram shows a shaded rectangle drawn on a centimetre grid.



(a) Find the area of the shaded rectangle.
State the units of your answer.

$$5 \times 3 = 15 \text{ cm}^2$$

15 cm²

(2)

(b) Find the perimeter of the shaded rectangle.

$$5 + 5 + 3 + 3 = 16 \text{ cm}$$

16

cm

(1)

(Total 3 marks)

Q8



Leave blank

9. The table shows some information about boxes of cereal on sale in a supermarket.

Cereal	Weight of 1 box	Cost of 1 box
Coco Pops	600 g	£2.79
Cornflakes	375 g	£1.26
Frosties	500 g	£1.55
Rice Krispies	600 g	£2.43
Shreddies	500 g	£1.85

- (a) How much does a box of Frosties cost?

£ 1.55
.....
(1)

A box of cereal has a weight of 375 g.

- (b) Write down the name of this cereal.

Cornflakes
.....
(1)

A box of cereal has a weight of 600 g and costs less than £2.50

- (c) Write down the name of this cereal.

Rice krispies
.....
(1)

Ed buys

one box of Coco Pops
and two boxes of Shreddies.

- (d) How much money in total does Ed spend?

Coco Pops £ 2.79
2 Shreddies $1.85 \times 2 = £ 3.70$
Total = $3.70 + 2.79$
3.70
2.79

£ 6.49

£ 6.49
.....
(2)

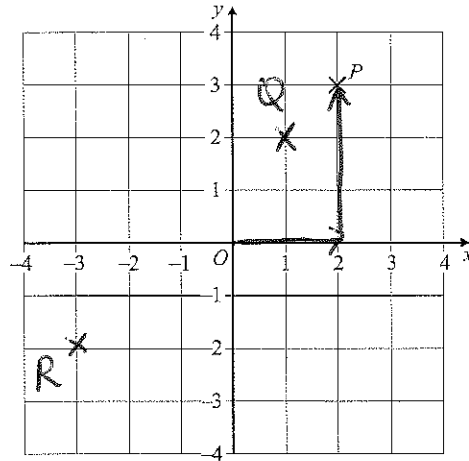
(Total 5 marks)

Q9



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10.



(a) Write down the coordinates of the point P .

(2, 3)
(1)

(b) (i) On the grid, plot the point $(1, 2)$.
Label the point Q .

(ii) On the grid, plot the point $(-3, -2)$.
Label the point R .

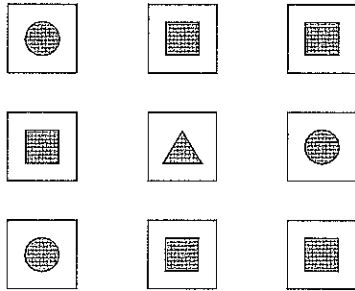
(2) Q10

(Total 3 marks)



Leave blank

11. James has 9 cards.
Each card has a shape drawn on it.
Each shape is a circle \odot or a square \boxtimes or a triangle \triangle .



James takes a card at random.

- (i) Which shape is **most** likely to be on the card?

Square

- (ii) What is the probability that James takes a card that has a square \boxtimes on it?

$$P(\text{square}) = \frac{5}{9}$$

5/9

(Total 3 marks)

Q11

12. Alan recorded the numbers of text messages sent by 7 people one day.

6 9 15 4 8 12 6

- (a) Find the mode.

6

(1)

- (b) Work out the range.

$$15 - 4 = 11$$

11

(2)

- (c) Find the median.

~~4~~ ~~6~~ ~~6~~ 8 ~~9~~ 12 ~~15~~

8

(1)

(Total 4 marks)

Q12



Leave blank

13. The table shows the percentage of each type of book in a library.

Type of book	Percentage
Children's	24%
General	42%
Mystery	13%
Romance	15%
Science fiction	2%
Thriller	4%

(a) What type of book has the smallest percentage?

Science fiction
(1)

(b) Write 13% as a decimal.

$$\frac{13}{100} = 0.13$$

0.13
(1)

(c) Write 24% as a fraction.
Give your answer in its simplest form.

$$\frac{24}{100} = \frac{6}{25}$$

(4)

$\frac{6}{25}$
(2)

There are 3000 books in the library.

(d) Work out 15% of 3000

$$\frac{15}{100} \times 3000 = 15 \times 30 = 450$$

OR

10%	is 300
5%	is 150
15%	is 450

450
(2)

(Total 6 marks)

Q13



14. Tanaka says 'When you multiply an odd number and an even number together, you will always get an odd number'.

Show that Tanaka is wrong.

odd \times even = even

$$3 \times 2 = 6$$

$$5 \times 4 = 20$$

Tanaka is wrong.

Leave
blank

Q14

(Total 2 marks)



15.

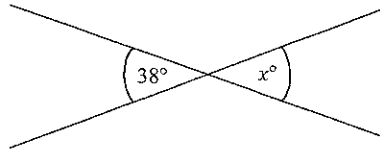


Diagram NOT accurately drawn

(a) (i) Write down the value of x .

38°

(ii) Give a reason for your answer.

opposite angles are equal. (2)

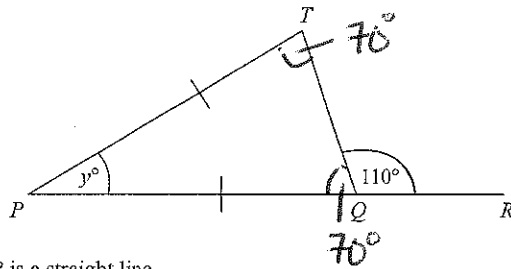


Diagram NOT accurately drawn

PQR is a straight line.
 $PT = PQ$.

(b) (i) Work out the value of y .

$\angle PQT = 180 - 110 = 70^\circ$
angles on straight line + 180°
 $\triangle PQT$ isosceles
 $y = 180 - (70 \times 2) = 40^\circ$
 40°

(ii) Give reasons for your answer.

- Isosceles \triangle angles at base are equal
 $\angle PTQ = \angle PQT = 70^\circ$
- Angles on straight line + 180°
 $\angle PQT = 180 - 110 = 70^\circ$ (4)

(Total 6 marks)

Q15



Leave
blank

16. (a) Simplify $p+p+p+p$

$$\frac{4p}{\dots\dots\dots} \quad (1)$$

(b) Simplify $m \times m \times m$

$$\frac{m^3}{\dots\dots\dots} \quad (1)$$

$$B = 2k + 12$$

$$k = 5$$

(c) Work out the value of B .

$$\begin{aligned} B &= 2 \times 5 + 12 \\ &= 10 + 12 \end{aligned}$$

$$B = \frac{22}{\dots\dots\dots} \quad (2)$$

$$T = 4w - 2$$

$$T = 22$$

(d) Work out the value of w .

$$\begin{aligned} 22 &= 4w - 2 \\ 22 + 2 &= 4w - 2 + 2 \\ 24 &= 4w \\ 4w &= 24 \therefore w = 6 \end{aligned}$$

$$w = \frac{6}{\dots\dots\dots} \quad (2)$$

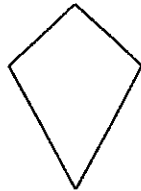
(Total 6 marks)

Q16



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17. Here is a quadrilateral.

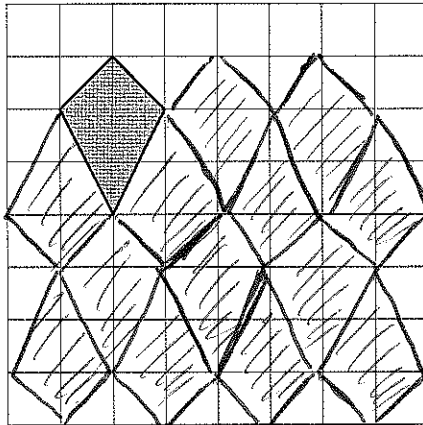


(a) Write down the mathematical name of this quadrilateral.

Kite

(1)

(b) On the grid below, show how the shaded shape can tessellate. You should draw at least six shapes.



(2)

Q17

(Total 3 marks)



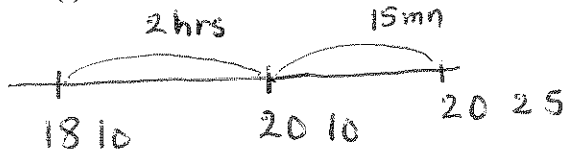
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18. Lesley goes to the cinema.

The film starts at 18 10

The film lasts for 135 minutes. $= 120\text{mn} + 15\text{mn}$

(a) At what time does the film finish? $= 2\text{ hrs } 15\text{ mn}$



20 25
(3)

There are 300 people in the cinema.

$\frac{1}{6}$ of the 300 people are boys. $= \frac{1}{6} \times 300 = \frac{1}{6} \times 30 \times 10 = \frac{30}{6} \times 10 = 50$

$\frac{3}{10}$ of the 300 people are girls. $= \frac{3}{10} \times 300 = \frac{300}{10} \times 3 = 30 \times 3 = 90$

The rest of the people are adults.

(b) Work out how many people are adults.

$$\begin{aligned} \text{boys} + \text{girls} &= 90 + 50 = 140 \\ \text{Adults} &= 300 - 140 \\ &= 160 \end{aligned}$$

160
(4)

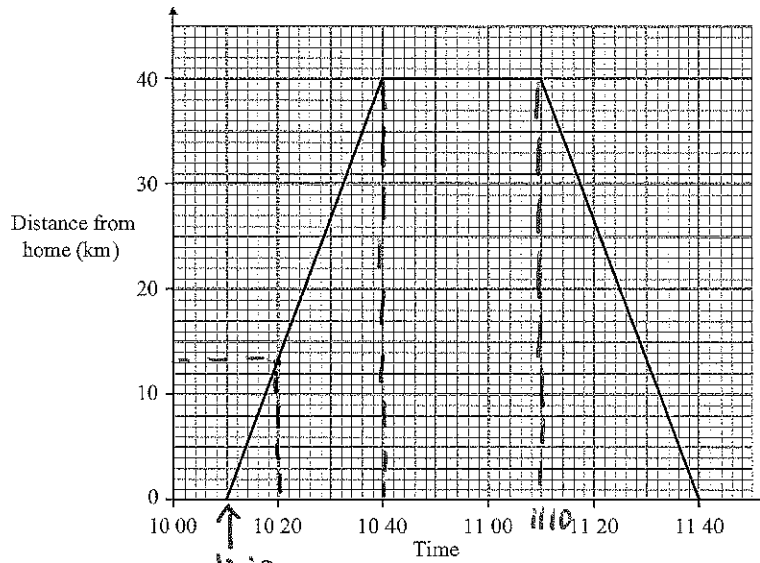
Q18

(Total 7 marks)



19. Nigel travelled from his home to his friend's house 40 km away. Nigel stayed for some time at his friend's house before returning home.

Here is a distance-time graph for Nigel's journey.



(a) At what time did Nigel leave home?

10 10
.....
(1)

(b) How far was Nigel from home at 10 20?

13
..... km
(1)

(c) How many minutes did Nigel spend at his friend's house?

From 10 40 to 11 10 30 minutes
(1)

(Total 3 marks)

Q19



20. (a) Work out $\frac{2}{3} \times \frac{1}{5} = \frac{2 \times 1}{3 \times 5} = \frac{2}{15}$

(b) Work out $\frac{1}{7} + \frac{2}{21} = \frac{1 \times 3}{21} + \frac{2}{21}$

$= \frac{3}{21} + \frac{2}{21} = \frac{5}{21}$

$$\frac{2}{15} \quad (1)$$

$$\frac{5}{21} \quad (2)$$

(Total 3 marks)

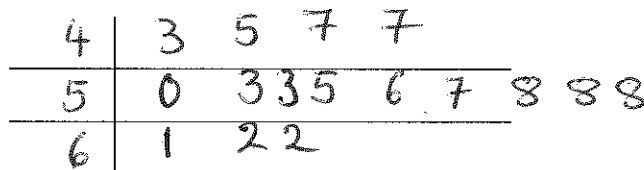
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Q20

21. Here are the weights, in grams, of 16 eggs.

~~47~~ ~~45~~ ~~50~~ ~~53~~ ~~43~~ 61 ~~53~~ 62
~~58~~ ~~56~~ 57 ~~47~~ ~~55~~ 62 ~~58~~ ~~58~~

Draw an ordered stem and leaf diagram to show this information. You must include a key.



Key: $6|1$ means 61g

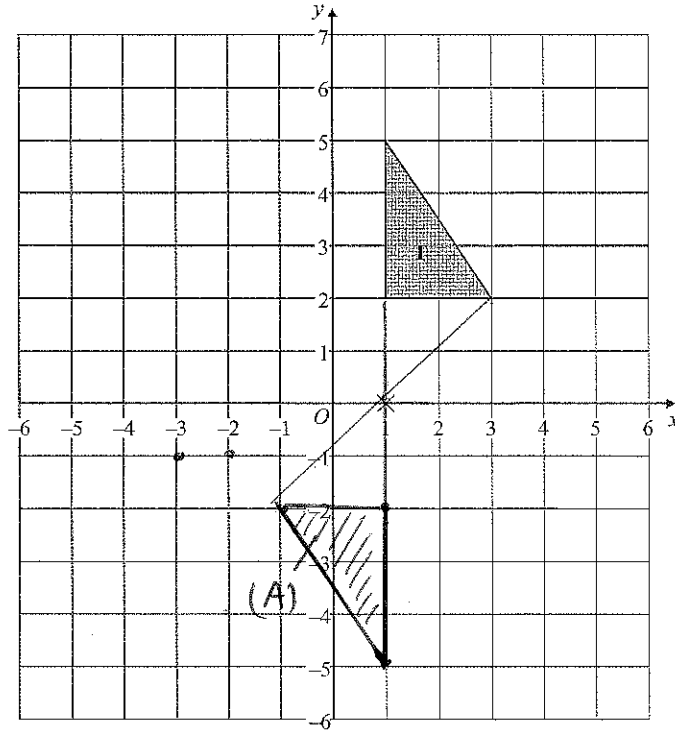
(Total 3 marks)

Q21



22.

Leave blank



$\downarrow + 180^\circ$

Triangle **T** has been drawn on the grid.

Rotate triangle **T** 180° about the point $(1, 0)$.
Label the new triangle **A**.

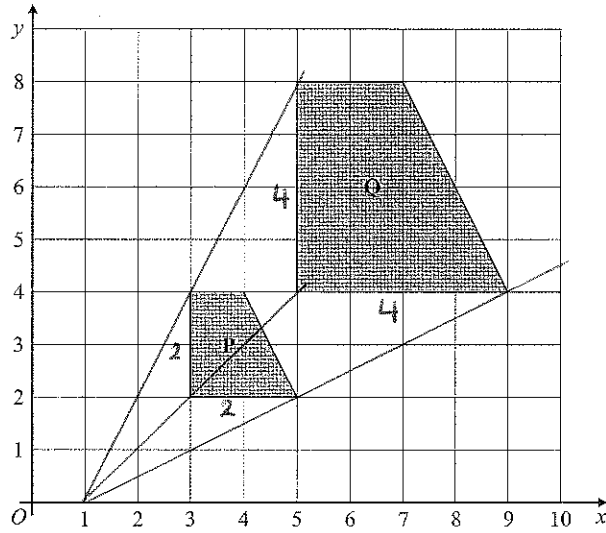
(Total 2 marks)

Q22



Leave blank

23.



Describe fully the single transformation which maps shape P onto shape Q.

Enlargement, scale factor 2,
centre (1, 0).

Q23

(Total 3 marks)



Leave blank

24. Anil wants to find out how many DVDs people buy.

He uses this question on a questionnaire.

How many DVDs do you buy?

1 - 5

5 - 10

10 - 15

15 - 20

Write down two different things wrong with this question.

1 Overlapping in number of DVDs. 1-5 5-10

2 No time frame (Per week/month?)

Q24

(Total 2 marks)

25. Anna and Bill share £40 in the ratio 2 : 3

Work out how much each person gets.

$$2 + 3 = 5 \text{ parts}$$

$$40 \div 5 = \pounds 8 \text{ (one part)}$$

$$\text{Anna} = 2 \times 8 = \pounds 16$$

$$\text{Bill} = 3 \times 8 = \pounds 24$$

Anna £ 16

Bill £ 24

Q25

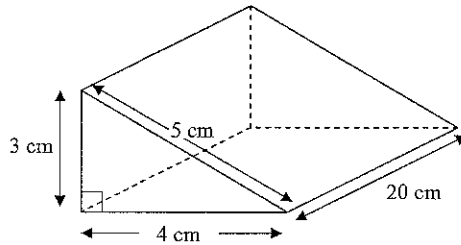
(Total 3 marks)



26.

Cross-section

Leave blank



$$\text{Area} = \frac{4 \times 3}{2} = 6 \text{ cm}^2$$

Diagram NOT accurately drawn

Work out the volume of the triangular prism.

$$\begin{aligned} \text{Volume} &= \text{Area of cross-section} \times \text{length} \\ &= 6 \times 20 = 120 \text{ cm}^3 \end{aligned}$$

120 cm³

Q26

(Total 2 marks)

27. Work out 4.52×36

$$\begin{array}{r} \overset{73}{36} \\ \times 4.52 \\ \hline = \quad \quad 72 \\ \quad \quad 1800 \\ \quad \quad 1440 \\ \hline = 162.72 \end{array}$$

162.72

Q27

(Total 3 marks)



Leave blank

28. (a) Factorise $3x + 12$

$$3 \times x + 3 \times 4$$
$$3(x + 4)$$

$$\underline{3(x + 4)}$$

(1)

(b) Solve $4(2x - 3) = 5x + 7$

$$4 \times 2x - 4 \times 3 = 5x + 7$$

$$8x - 12 = 5x + 7$$

$$8x - 5x - 12 = 5x - 5x + 7$$

$$3x - 12 = 7$$

$$3x - 12 + 12 = 7 + 12$$

$$3x = 19$$

$$x = 19/3$$

$$x = \frac{19}{3} = 6\frac{1}{3}$$

(3)

(c) Expand and simplify $(y + 4)(y + 5)$

$$y^2 + 5y + 4y + 20$$

$$y^2 + 9y + 20$$

$$\underline{y^2 + 9y + 20}$$

(2)

Q28

(Total 6 marks)

TOTAL FOR PAPER: 100 MARKS

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