

Name

Class

**Pre Public Exam**  
**June 2016**  
**Paper 1F**  
**Foundation Tier**  
**Edexcel Style**

Non-Calculator

Time **1 hour 30 minutes**

Marks Available **80**

Commissioned by The PiXL Club Ltd.

Question	Mark	Maximum mark
1		1
2		1
3		1
4		2
5		3
6		2
7		3
8		2
9		1
10		1
11		2
12		3
13		4
14		3
15		3
16		5
17		5
18		4
19		2
20		2
21		3
22		2
23		3
24		3
25		5
26		2
27		3
28		5
29		2
30		2
<b>Total</b>		<b>80</b>

**Question 1.**

Write the value of the 4 in the number 24 375.

.....

**(Total 1 mark)**

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**Question 2.**

Write 0.4 as a percentage.

.....

**(Total 1 mark)**

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**Question 3.**

Change 256 mm into cm.

.....

**(Total 1 mark)**

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**Question 4.**

Write down all the factors of 24.

.....

**(Total 2 marks)**

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**Question 5.**

Mr. Smith is going to buy pizza for all the students in Year 11.  
Each of the 145 students gets one slice of pizza.

Each pizza can be cut into 6 slices.

Work out the least number of pizzas Mr. Smith needs to buy.

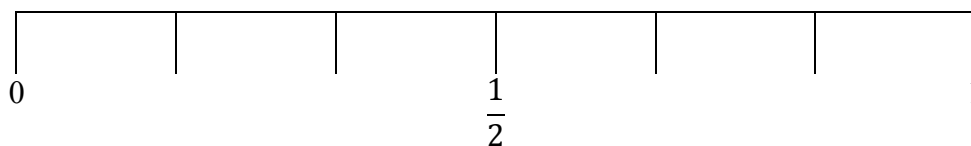
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**(Total 3 marks)**

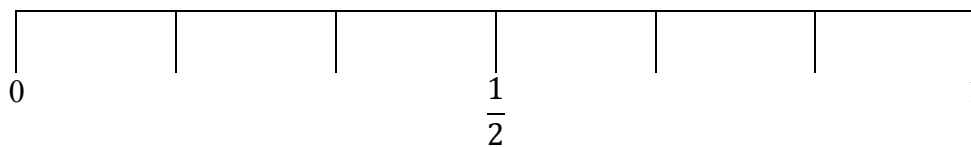
**Question 6.**

Lewis rolls a fair die once.

- (i) On the probability scale below, mark with a cross (x), the probability that the dice will land on a prime number.



- (ii) On the probability scale, mark with a cross (x), the probability that the dice will land on a number greater than 2.



**(Total 2 marks)**

**Question 7.**

The total cost of these 4 cupcakes is £3.40



Work out the cost of seven of these cupcakes.

.....

**(Total 3 marks)**

**Question 8.**

Farrah is going to buy a second hand watch.

The watch costs £60.

Farrah pays a deposit of 15% of the price of the watch.

How much money does Farrah pay as a deposit?

.....

**(Total 2 marks)**

**Question 9.**

Dipesh has the following 7 cards.



Dipesh takes one card at random.

What is the probability that Dipesh picks out a card with a circle?

.....

**(Total 1 mark)**

**Question 10.**

Michael and Paul share some money in the ratio 3: 5  
What fraction of the money does Michael get?

.....

**(Total 1 mark)**

**Question 11.**

Here is the menu in a café.

<b>Menu</b>	
<b>Starter</b>	<b>Main</b>
Salad (S)	Fish (F)
Prawns (P)	Lamb (L)
	Eggs (E)

A meal is a starter and a main course.

One possible meal is a salad and fish (S, F)

Jane wants to choose a meal.

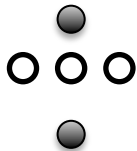
Write down all the different meals she could have.

**(Total 2 marks)**

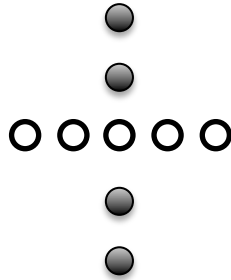
**Question 12.**

Here are the first three patterns of a sequence.

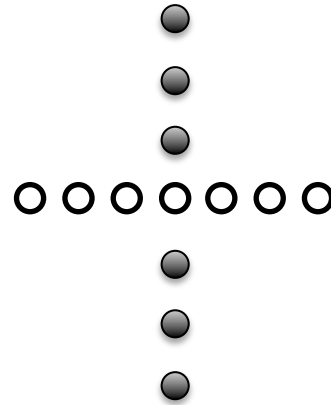
The patterns are made from grey dots and white dots.



Pattern number 1



Pattern number 2



Pattern number 3

(a) How many grey dots are there in pattern number 7?

.....

(2)

Harry says

“There are 7 white dots in pattern number 3, so there will be 14 white dots in pattern number 6.”

(b) Is Harry correct?

Give a reason for your answer.

(1)

**(Total 3 marks)**

**Question 13.**

A machine bakes 286 cakes every hour.

It costs 51p to produce each cake.

Each cake is sold for £2.99.

(a) Work out an estimate of the profit made each hour.

.....

(3)

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

Give a reason for your answer.

(1)

**(Total 4 marks)**

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**Question 14.**

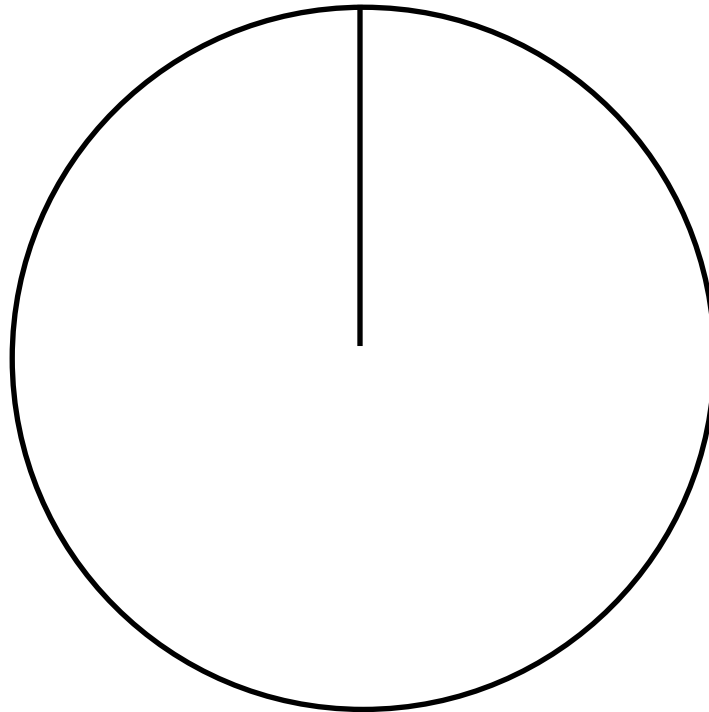
There are 60 students in year 7.

Students in year 5 study either French or Spanish, or both.

The table shows this information

	French	Spanish	Both
No of students	22	30	8

Draw an accurate pie- chart to show this information.



(3)

**(Total 3 marks)**



**Question 15.**

Boards are going to be used to cover a floor.

The floor is a 600 cm by 500 cm rectangle.

Each board is 2 m long and 1.5 m wide.

Exactly 10 boards can be used to cover the floor completely.

Show in a labelled sketch how this can be done.

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**(Total 3 marks)**

**Question 16.**

Pam buys 20 packs of highlighters.

There are 15 highlighters in each pack.

Each pack costs £6.

Pam sells  $\frac{3}{5}$  of the highlighters she bought.

She sells each of these highlighters for 60p.

She then sells all of the remaining highlighters at 2 highlighters for 50p.

Did Pam make a profit or a loss?

You must show working to justify your answer.

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**(Total 5 marks)**

**Question 17.**

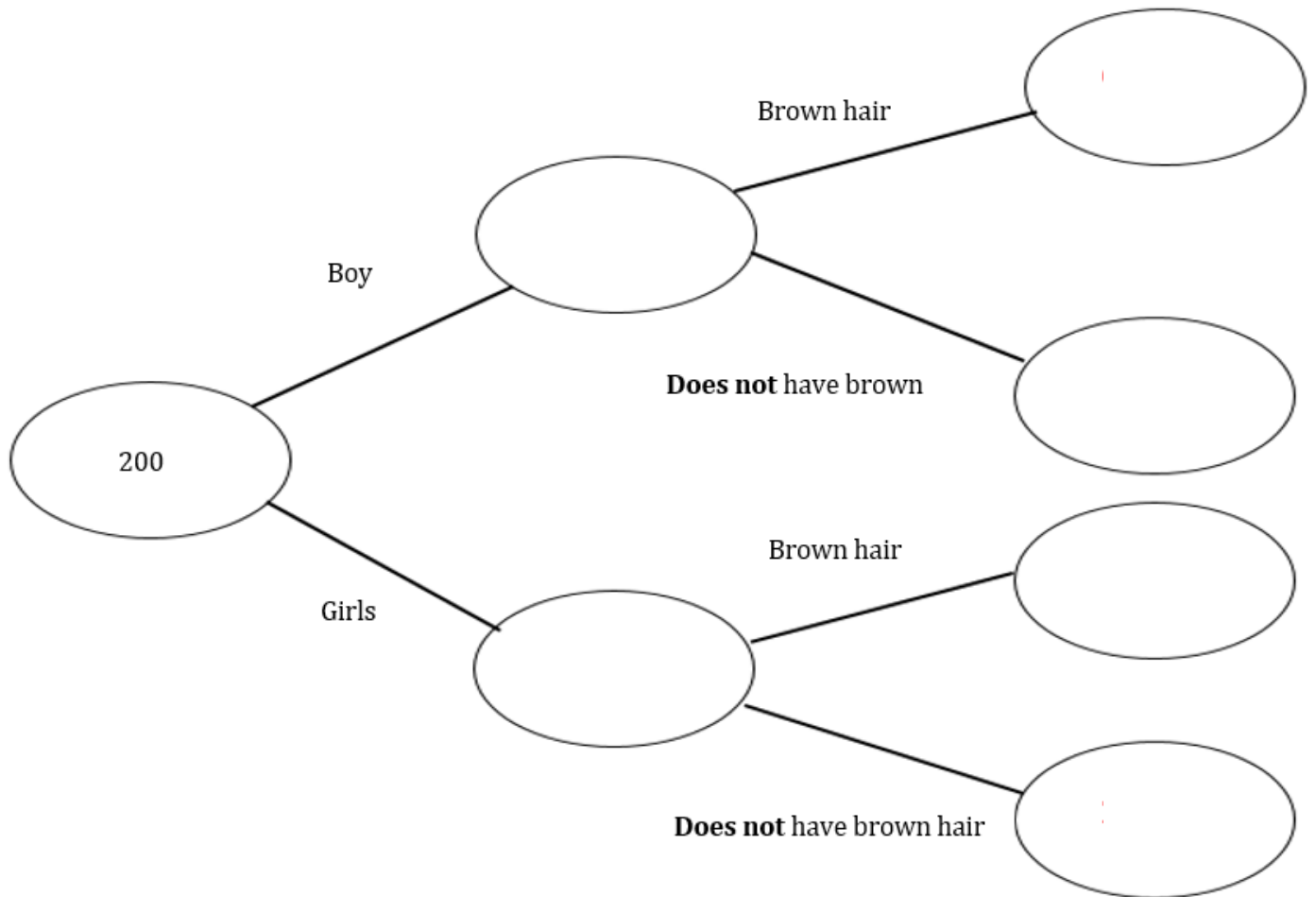
There are 200 students in year 10.

124 of these students are girls.

37 of the students do not have brown hair.

98 of the girls have brown hair

(a) Use this information to complete the frequency tree. (3)



One of the boys is chosen at random.

(b) Work out the probability that this boy **does not** have brown hair.

.....

(2)

**(Total 5 marks)**

**Question 18.**

(a) Work out  $\frac{1}{8} + \frac{3}{5}$

.....

(2)

(b) Work out  $1\frac{3}{4} \div \frac{5}{9}$

.....

(2)

**(Total 4 marks)**

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**Question 19.**

Solve  $5x - 1 = 3x + 17$

.....

**(Total 2 marks)**

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**Question 20.**

In a sale, normal prices are reduced by 20%.  
The normal price of a handbag is reduced by £18.

Work out the normal price of the handbag.

.....

**(Total 2 marks)**

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**Question 21.**

Work out  $2.7 \times 4.63$

.....

**(Total 3 marks)**

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**Question 22.**

Expand and simplify  $(x + 4)(x + 9)$

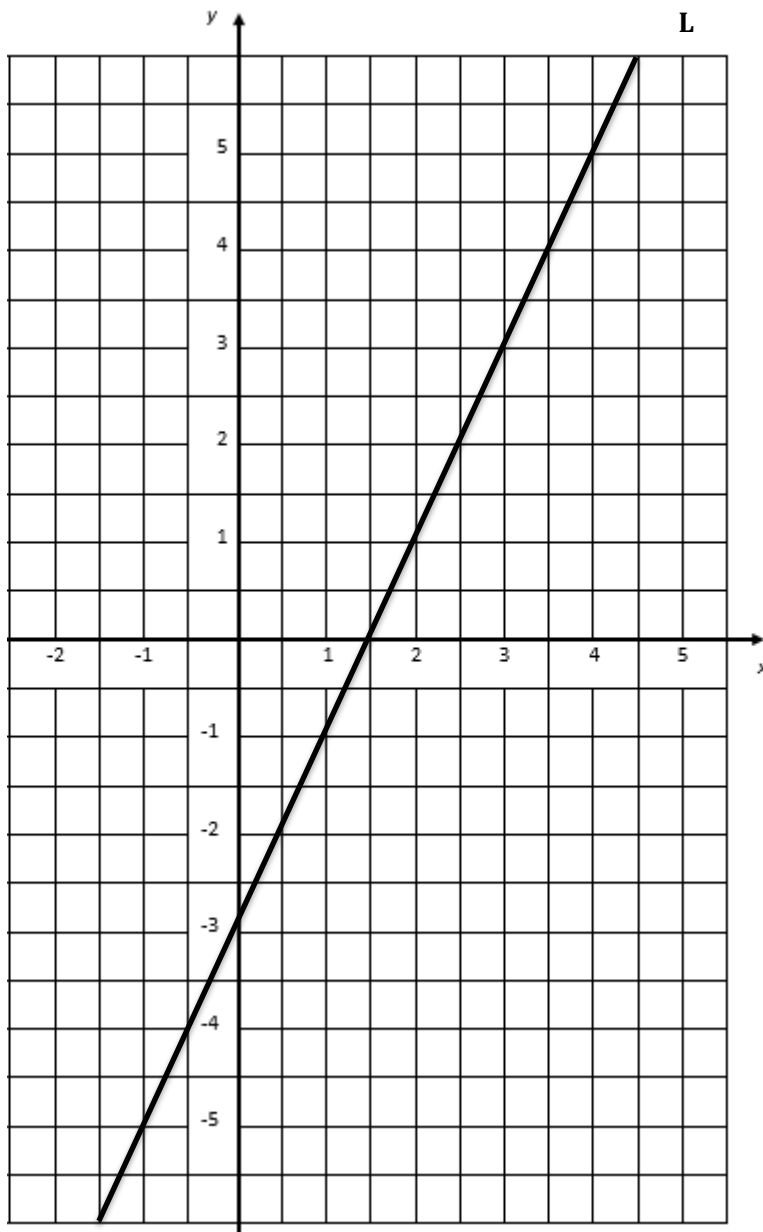
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**(Total 2 marks)**

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**Question 23.**

The line L is drawn on the grid below.



Find an equation for the straight line L.

Give your answer in the form  $y = mx + c$ .

.....

**(Total 3 marks)**

**Question 24.**

Mr Adi types up a short story.

It takes him 9 minutes to finish typing up the story at an average of 40 words per minute.

Mr Blade also types up the same story.

He takes 12 minutes to type it.

Work out Mr Blade's average number of words per minute.

.....words per minute

**(Total 3 marks)**

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**Question 25.**

In a shop, the ratio of the number of male staff to the number of female staff is 2: 3.

20% of the male staff are under the age of 20.

40% of the female staff are under the age of 20.

(a) What percentage of all the people in the company are under the age of 20?

.....

(4)

(b) A new member of staff joins the shop.

Karen is a 35 year old female.

Explain whether this will change your answer in part (a)

.....

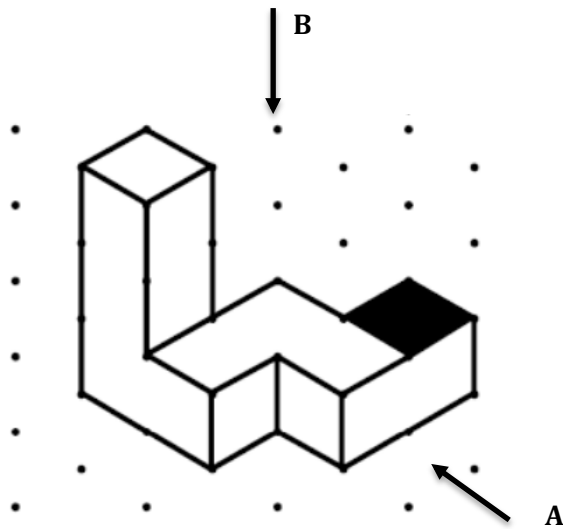
.....

(1)

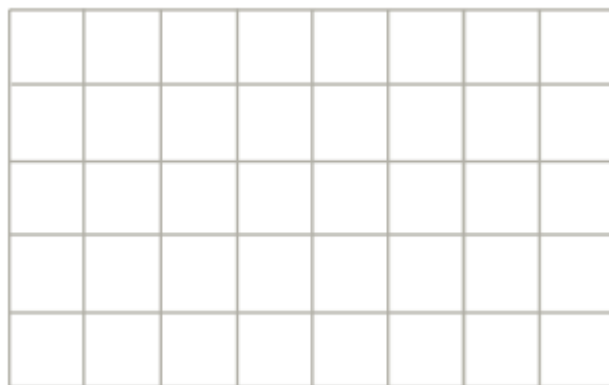
**(Total 5 marks)**

**Question 26.**

The diagram below shows a solid made from some cubes.

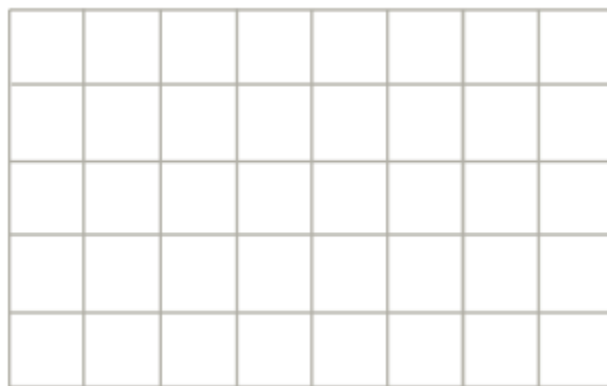


(a) On the grid below, draw a side elevation from the direction of the arrow A.



(1)

(b) On the grid below, draw the solid from the direction of the arrow B.



(1)

**(Total 2 marks)**

**Question 27.**

There are 900 students at a school.

Joe is organising a party.

He is going to order packets of crisps.

Joe takes a sample of 30 students at the school.

He asks them which flavour of crisps they want.

The table below shows their results.

<b>Flavour</b>	<b>Number of students</b>
Salt and vinegar	10
Ready salted	4
Barbecue	7
Cheese and Onion	9

Work out how much packets of Cheese and Onion crisps Joe should order.

Write down any assumptions you make and explain how this could affect your answer.

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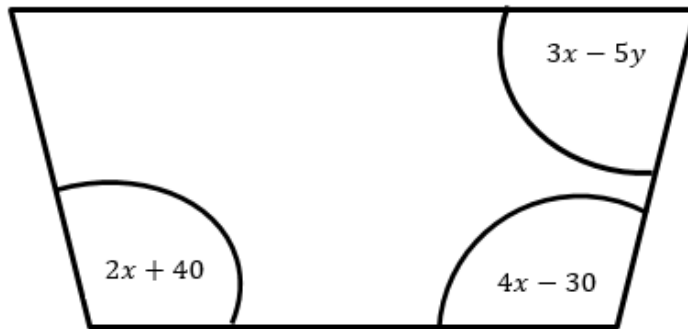
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**(Total 3 marks)**

**Question 28.**

This is an isosceles trapezium.

Diagram not drawn accurately



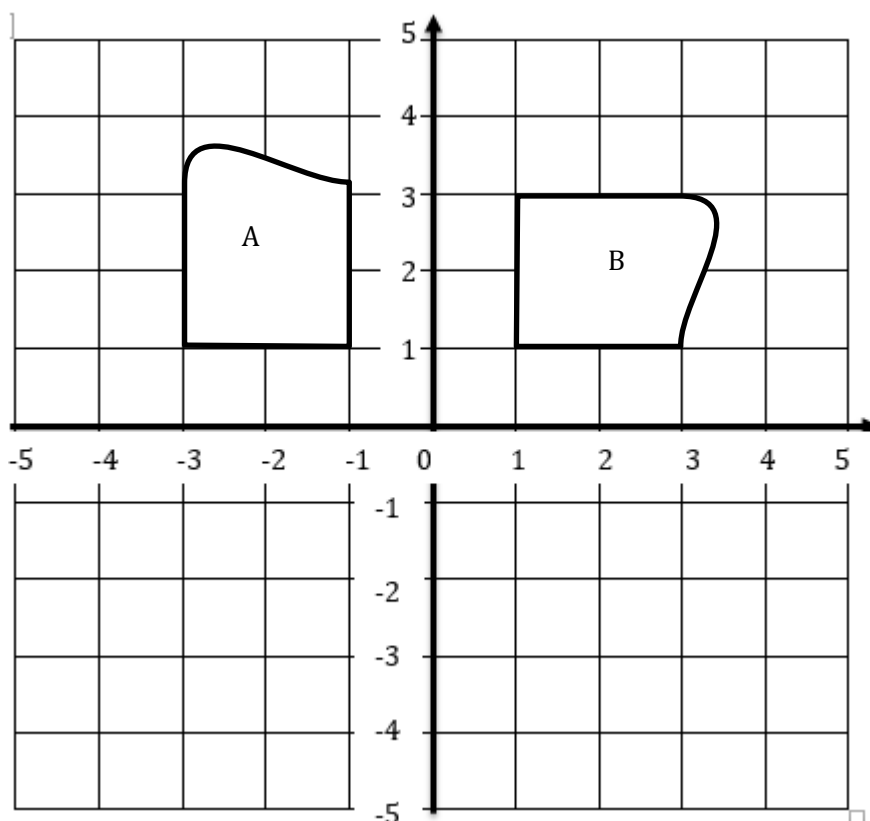
Work out the value of  $x$  and the value of  $y$ .

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(Total 5 marks)

**Question 29.**



Describe fully the single transformation that maps shape A onto shape B.

.....  
 .....

(Total 2 marks)

**Question 30.**

$$\mathbf{a} = \begin{pmatrix} 5 \\ -3 \end{pmatrix}$$

$$\mathbf{b} = \begin{pmatrix} 2 \\ 7 \end{pmatrix}$$

Work out  $\mathbf{b} - 3\mathbf{a}$  as a column vector.

.....

(Total 2 marks)

**TOTAL FOR PAPER IS 80 MARKS**