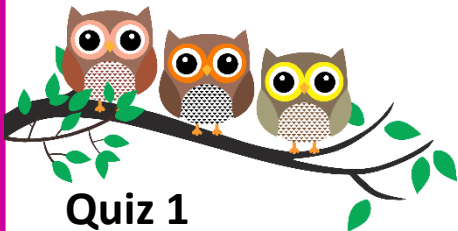


# Higher Interleaving Quiz

## Branch 14

### Quizzes 1 to 3



#### Quiz 1

Q	Topic	$\Sigma$	R	A	G
1	Proportion				
2	Functions				
3	Perimeter of a Sector				
4	Scatter Graph				

#### Home Study Focus

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Home Study Completed

#### Quiz 2

Q	Topic	$\Sigma$	R	A	G
1	Reverse Percentage				
2	Simultaneous Equations				
3	Trigonometry				
4	Probability Tree				

#### Home Study Focus

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Home Study Completed

#### Quiz 3

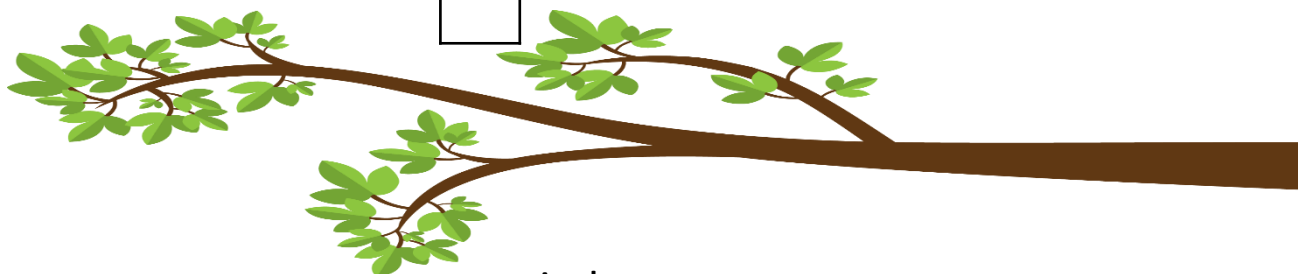
Q	Topic	$\Sigma$	R	A	G
1	Ratio Problem				
2	Regional Inequalities				
3	Circle Theorem				
4	Averages from a Table				

#### Home Study Focus

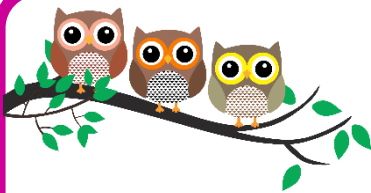
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Home Study Completed



# Higher Interleaving Quiz



## Branch 14 Quiz 1

1) To complete a task in 5 days a company needs 4 people each working 8 hours per day. The company instead decides to have 4 people working 5 hours per day. Assume that each person works at the same rate. **(3 marks)**

a) How many days will the task take to complete?

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Answer: \_\_\_\_\_

b) Comment on how the assumption affects your answer to part (a). **(1 mark)**

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2) The functions  $f(x)$  and  $g(x)$  are given by the following:

$$f(x) = 2x + 5$$

$$g(x) = x^2 - 5$$

a) Calculate the value of  $gf(4)$  **(2 marks)**

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Answer: \_\_\_\_\_

b) Solve the equation  $fg(x) = 93$  **(3 marks)**

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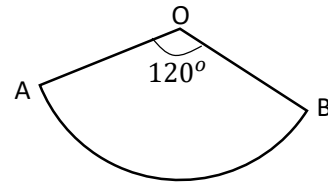
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Answer: \_\_\_\_\_

3) OAB is a sector of a circle, centre O and radius 12 cm. Find the perimeter of the sector.

Give your answer in terms of  $\pi$ . **(3 marks)**

**(3 marks)**



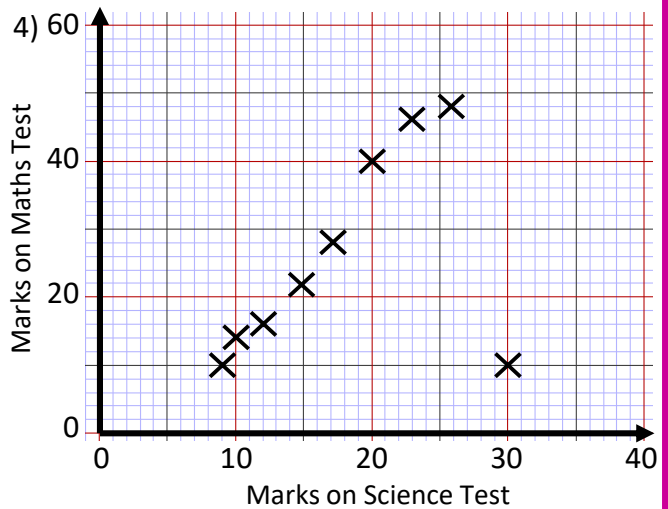
Not to scale

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Answer: \_\_\_\_\_



a) Circle and explain what might have caused the anomaly. **(1 mark)**

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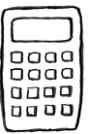
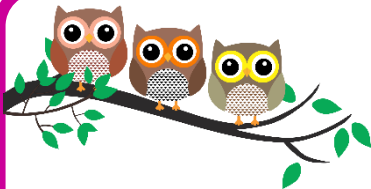
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b) Nathan was absent for the Maths test. He scored 18 marks on the Science test. Estimate Nathan's Maths test score. **(2 marks)**

Answer: \_\_\_\_\_

Q	Topic	$\Sigma$	R	A	G
1	Proportion				
2	Functions				
3	Perimeter of a Sector				
4	Scatter Graph				

# Higher Interleaving Quiz



## Branch 14 Quiz 2

- 1) Louis scored on a test 98% . He got 245 marks on the test. Work out he total number marks the test was out of. **(3 marks)**

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Answer: \_\_\_\_\_

- 2)  $xy = 12$   
 $y = 2x + 5$   
 Find a value for  $x$  and  $y$ . **(4 marks)**

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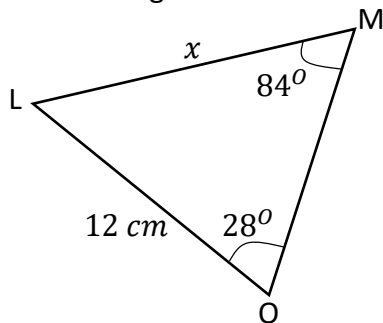
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$x =$  \_\_\_\_\_  $y =$  \_\_\_\_\_

- 3) Calculate the length of side  $LM$ . **(3 marks)**




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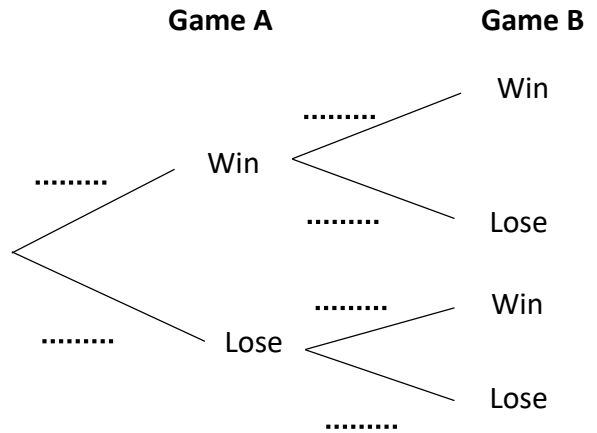


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Answer: \_\_\_\_\_

- 4) Liverpool FC take part in two matches. The probability of Liverpool winning game A is 0.3. If Liverpool wins game A, then the probability of it winning game B is 0.2. If Liverpool loses game A, then the probability of it winning game B is 0.4.

- a) Complete the probability tree diagram. **(2 marks)**



- b) Liverpool won just one game. Is it more likely they won game A or game B. You must show your working. **(3 marks)**

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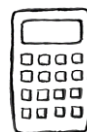
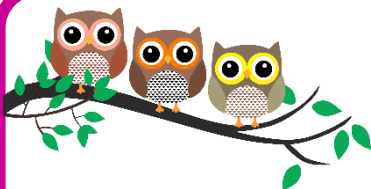


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Answer: \_\_\_\_\_

Q	Topic	$\Sigma$	R	A	G
1	Reverse Percentage				
2	Simultaneous Equations				
3	Trigonometry				
4	Probability Tree				

# Higher Interleaving Quiz



## Branch 14 Quiz 3

1) In a school, the ratio of the number of males to the number of females is 2:3.

15% of the males are in KS3

30% of the females are in KS3

What percentage of all the students in the school are in not in KS3? **(3 marks)**

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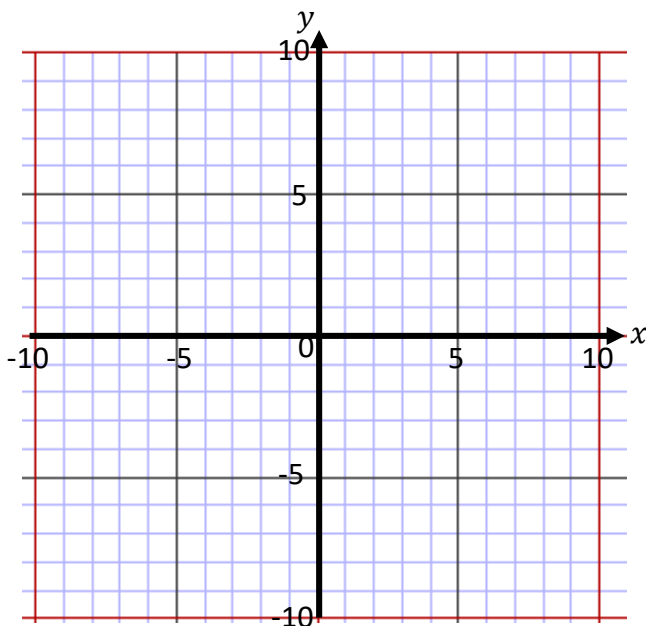
Answer: \_\_\_\_\_

2) The region **R** satisfies the inequalities

$$-4 < y \leq 6, \quad x \geq -4, \quad 2y + x > -4$$

On the grid below, draw straight lines and use shading to show the region **R**.

**(4 marks)**



3)  $A, B, C$  and  $D$  are points on the circumference of a circle, centre  $O$ .

Work out the size of angle  $ADC$ .

You must give reasons for your working. **(4 marks)**

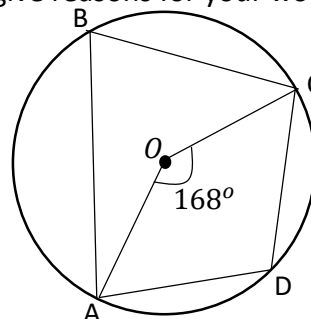


Diagram **NOT** accurately drawn

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Answer: \_\_\_\_\_

4) When visiting a health clinic patient heights were measured in centimetres.

Height ( $h$ ) in cm	Frequency		
$110 < h \leq 150$	34		
$150 < h \leq 160$	45		
$160 < h \leq 170$	58		
$170 < h \leq 200$	44		

a) Write down the modal class interval. **(1 marks)**

Answer: \_\_\_\_\_

b) Estimate the mean height of the patients.

**(3 marks)**

Answer: \_\_\_\_\_

Q	Topic	$\Sigma$	R	A	G
1	Ratio Problem				
2	Regional Inequalities				
3	Circle Theorem				
4	Averages from a Table				