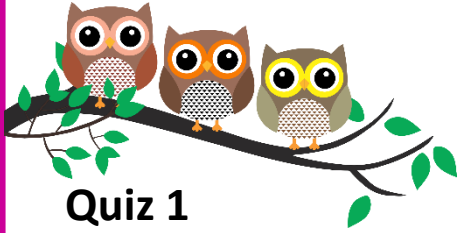


Higher Interleaving Quiz

Branch 6

Quizzes 1 to 3



Quiz 1

| Q | Topic | Σ | R | A | G |
|---|-----------------------|----------|---|---|---|
| 1 | Proportion | | | | |
| 2 | Functions | | | | |
| 3 | Perimeter of a Sector | | | | |
| 4 | Scatter Graph | | | | |
| | | | | | |

Home Study Focus

Home Study
Completed

Quiz 2

| Q | Topic | Σ | R | A | G |
|---|------------------------|----------|---|---|---|
| 1 | Reverse Percentage | | | | |
| 2 | Simultaneous Equations | | | | |
| 3 | Trigonometry | | | | |
| 4 | Probability Tree | | | | |
| | | | | | |

Home Study Focus

Home Study
Completed

Quiz 3

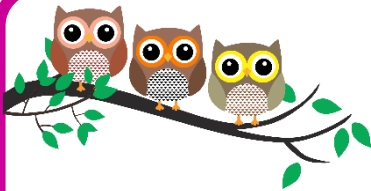
| Q | Topic | Σ | R | A | G |
|---|-----------------------|----------|---|---|---|
| 1 | Ratio Problem | | | | |
| 2 | Regional Inequalities | | | | |
| 3 | Circle Theorem | | | | |
| 4 | Averages from a Table | | | | |
| | | | | | |

Home Study Focus

Home Study
Completed



Higher Interleaving Quiz



Branch 6 Quiz 1

1) To complete a task in 9 days a company needs 5 people each working 8 hours per day. The company instead decides to have 6 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?

Answer: _____

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

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

$$f(x) = 3x$$

$$g(x) = 2x + 4$$

a) Calculate the value of $gf(5)$ **(2 marks)**

Answer: _____

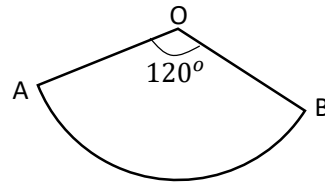
b) Solve the equation $fg(x) = 24$ **(3 marks)**

Answer: _____

3) OAB is a sector of a circle, centre O and radius 6 cm. Find the perimeter of the sector.

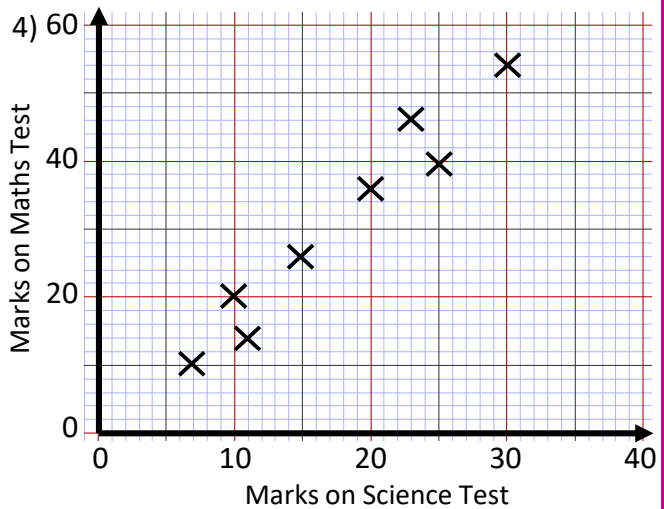
Give your answer in terms of π . **(3 marks)**

(3 marks)



Not to scale

Answer: _____



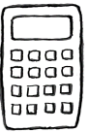
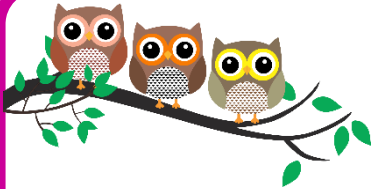
a) Describe the relationship between the marks on the Science and Maths tests. **(1 mark)**

b) Mo was absent for the Maths test. He scored 22 marks on the Science test. Estimate Mo's Maths test score. **(2 marks)**

Answer: _____

| Q | Topic | Σ | R | A | G |
|---|-----------------------|----------|---|---|---|
| 1 | Proportion | | | | |
| 2 | Functions | | | | |
| 3 | Perimeter of a Sector | | | | |
| 4 | Scatter Graph | | | | |

Higher Interleaving Quiz



Branch 6 Quiz 2

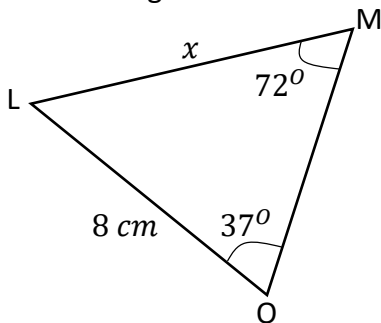
- 1) Ryan scored on a test 85% . He got 68 marks on the test. Work out he total number marks the test was out of. **(3 marks)**

Answer: _____

- 2) At a concert
 3 adult and 4 child tickets cost £39
 2 adult and 6 child tickets cost £41
 Work out the cost of an adult ticket and the cost of a child ticket. **(4 marks)**

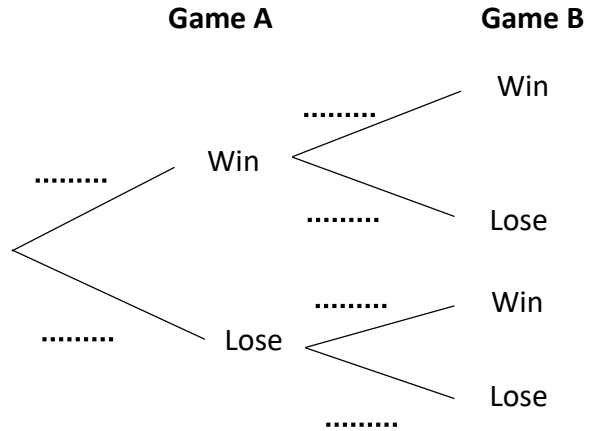
Adult = _____ Child = _____

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



Answer: _____

- 4) Sarah takes part in two tennis matches. The probability of Sarah winning game A is 0.4. If Sarah wins game A, then the probability of her winning game B is 0.8. If Sarah loses game A, then the probability of her winning game B is 0.3.
 a) Complete the probability tree diagram. **(2 marks)**

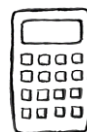
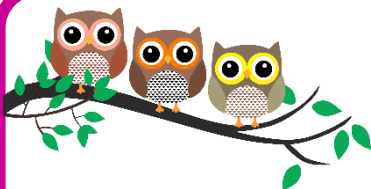


- b) Sarah won just one game. Is it more likely she won game A or game B.
 You must show your working. **(3 marks)**

Answer: _____

| Q | Topic | Σ | R | A | G |
|---|------------------------|---|---|---|---|
| 1 | Reverse Percentage | | | | |
| 2 | Simultaneous Equations | | | | |
| 3 | Trigonometry | | | | |
| 4 | Probability Tree | | | | |

Higher Interleaving Quiz



Branch 6 Quiz 3

1) In a school, the ratio of the number of males to the number of females is 3: 7.

20% of the males are in KS3

70% of the females are in KS3

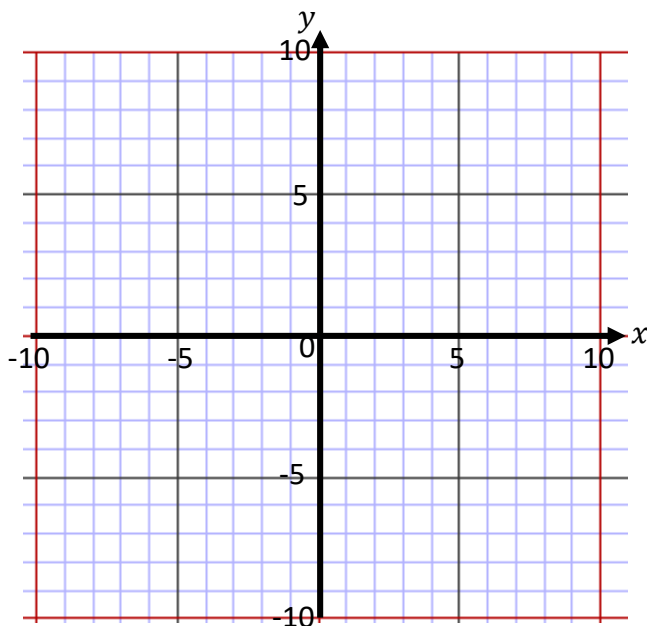
What percentage of all the students in the school are in KS3? **(3 marks)**

Answer: _____

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

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

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)**

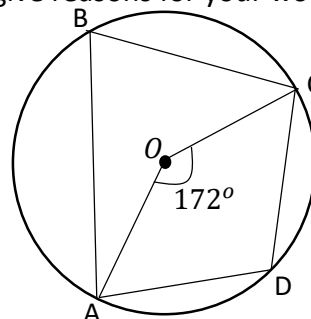


Diagram **NOT** accurately drawn

Answer: _____

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

| Height (h) in cm | Frequency | | |
|----------------------|-----------|--|--|
| $110 < h \leq 150$ | 22 | | |
| $150 < h \leq 160$ | 36 | | |
| $160 < h \leq 170$ | 53 | | |
| $170 < h \leq 200$ | 39 | | |
| | | | |

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

Answer: _____

b) Estimate the mean height of the patients. **(3 marks)**

Answer: _____

| Q | Topic | Σ | R | A | G |
|---|-----------------------|----------|---|---|---|
| 1 | Ratio Problem | | | | |
| 2 | Regional Inequalities | | | | |
| 3 | Circle Theorem | | | | |
| 4 | Averages from a Table | | | | |