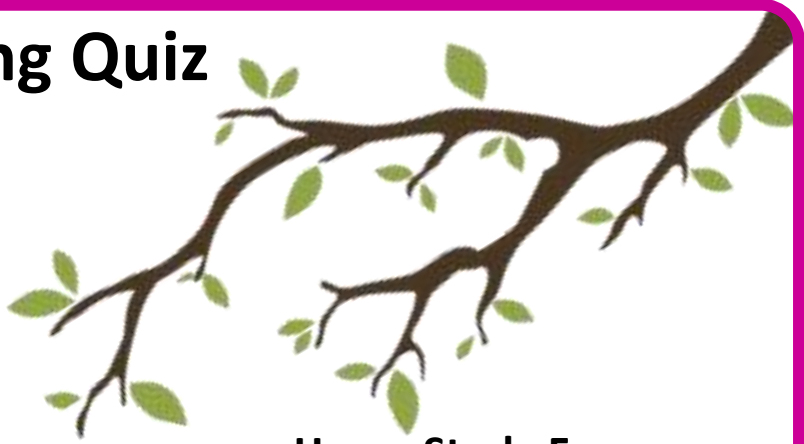
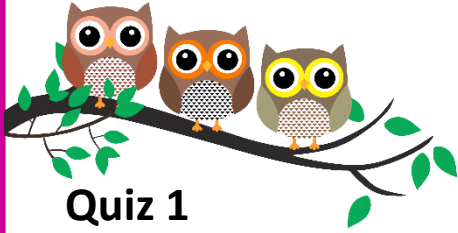


Higher Interleaving Quiz

Branch 7

Quizzes 1 to 3



Quiz 1

Q	Topic	Σ	R	A	G
1	Product of Prime Factors				
2	Functions				
3	Right Angled Trigonometry				
4	Cumulative Frequency				

Home Study Focus

Home Study Completed

Quiz 2

Q	Topic	Σ	R	A	G
1	Percentage Problem				
2	Forming and Solving Equations				
3	Area Problem				
4	Averages from a Table				

Home Study Focus

Home Study Completed

Quiz 3

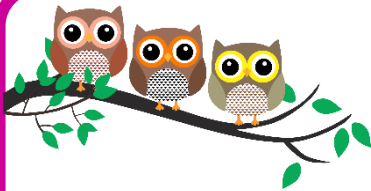
Q	Topic	Σ	R	A	G
1	Recurring Decimal				
2	Regional Inequalities				
3	Volume and Mass				
4	Probability				

Home Study Focus

Home Study Completed



Higher Interleaving Quiz



Branch 7 Quiz 1

1) Express 252 as a product of its prime factors in index form. **(3 marks)**

Answer: _____

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

$$f(x) = x + 4$$

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

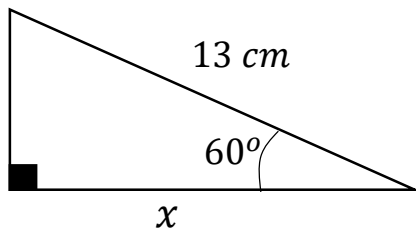
a) Calculate the value of $gf(5)$ **(2 marks)**

Answer: _____

b) Find $g^{-1}(x)$ **(2 marks)**

Answer: _____

3) Work out the length of side x . **(3 marks)**

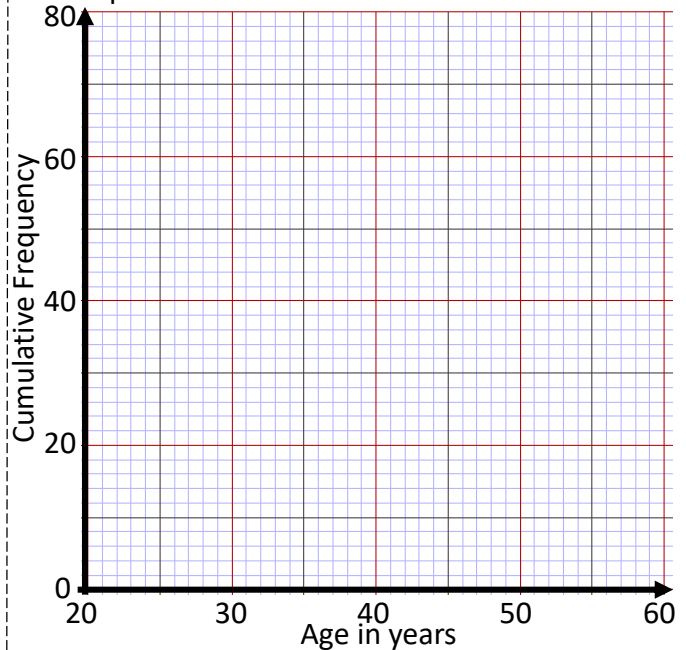


Answer: _____

4) This frequency table gives information about the ages of 80 teachers.

Age (A) in years	Frequency		
$25 < A \leq 30$	13		
$30 < A \leq 40$	19		
$40 < A \leq 50$	25		
$50 < A \leq 55$	14		
$55 < A \leq 60$	9		

a) Draw a cumulative frequency graph to represent this information. **(3 marks)**

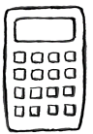
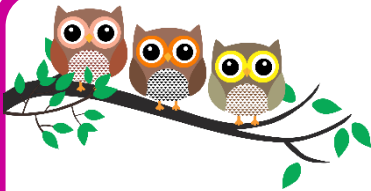


b) Estimate the number of teachers who are older than 45 years. **(2 marks)**

Answer: _____

Q	Topic	Σ	R	A	G
1	Product of Prime Factors				
2	Functions				
3	Right Angled Trigonometry				
4	Cumulative Frequency				

Higher Interleaving Quiz



Branch 7 Quiz 2

- 1) Ollie wants to invest £15 000 into a bank account for 3 years.
Which account should he choose? **(5 marks)**

Account A

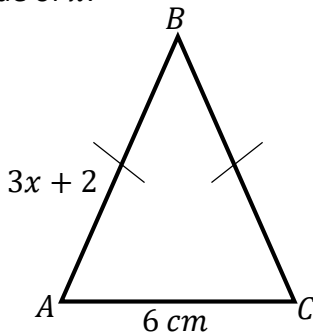
Interest:
2.5% per year
compound interest

Account B

Interest:
3% for the first year,
2.5% for the second year
and
1.5% for the third year.

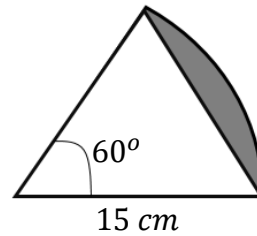
Answer: _____

- 2) In the diagram all measurements are in cm.
ABC is an isosceles triangle.
The perimeter of the triangle is 55 cm
Find the value of x . **(3 marks)**



Answer: _____

- 3) Find the area of the shaded region. **(4 marks)**



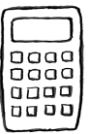
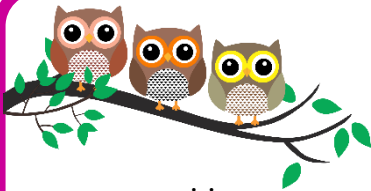
Answer: _____

- 4) Times of both men and women running the London Marathon were recorded.
The women's mean time was 4 hours and 30 minutes.
The table below shows the men's times.
Compare the times that the men and women ran the race in. **(3 marks)**

Time (t) in mins	Frequency
$220 < t \leq 260$	27
$260 < t \leq 280$	32
$280 < t \leq 300$	24
$300 < t \leq 330$	17

Q	Topic	Σ	R	A	G
1	Percentage Problem				
2	Forming and Solving Equations				
3	Area Problem				
4	Averages from a Table				

Higher Interleaving Quiz



Branch 7 Quiz 3

1) Express $0.\dot{1}\dot{5}$ as a fraction in its simplest form.

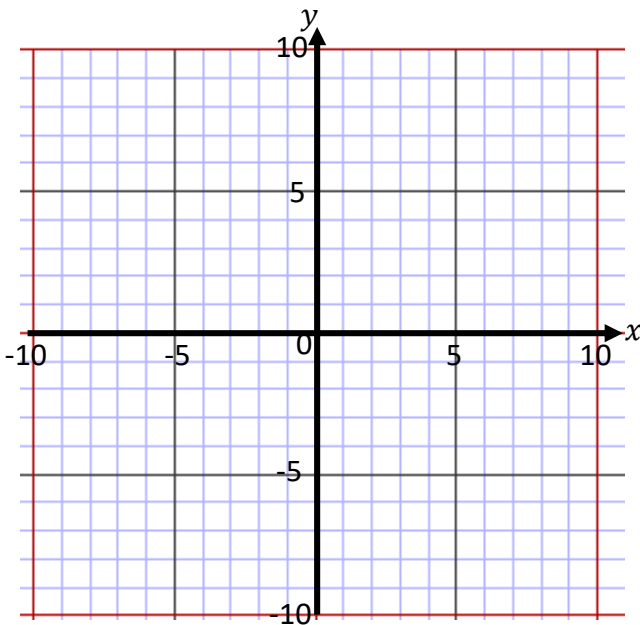
(3 marks)

Answer: _____

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

$$y \geq x - 3 \quad y < 3 \quad y - 3x \leq 4$$

On the grid below, draw straight lines and use shading to show the region **R**. (4 marks)



3) The diagram shows a solid cylinder. (5 marks)

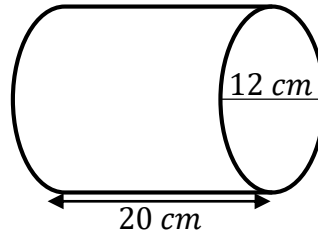


Diagram **NOT** accurately drawn

The cylinder is made from titanium.
The density of titanium is 4.4 g/cm^3
Calculate the mass of the cylinder.

Answer: _____

4) Here is a spinner.



a) Abdul is going to spin the spinner 5 times. He says, "I will get one of each number." Give a reason why he could be wrong. (1 mark)

b) Siraj spins the spinner 40 times. (2 marks)

His results are shown in the table below.

Number Spun	1	2	3	4	5
Frequency	10	6	4	8	12

Work out the relative frequency of spinning an even number.

Answer: _____

Q	Topic	Σ	R	A	G
1	Recurring Decimal				
2	Regional Inequalities				
3	Volume and Mass				
4	Probability				