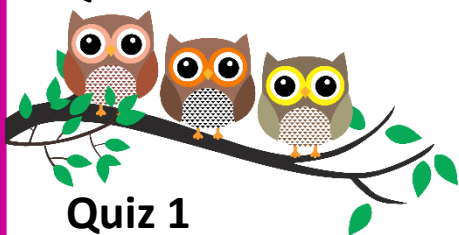


# Higher Interleaving Quiz

## Branch 12

### Quizzes 1 to 3



#### Quiz 1

Q	Topic	$\Sigma$	R	A	G
1	Product of Prime Factors				
2	Factorise and Solve				
3	Circle Theorems				
4	Probability Tree				

#### Home Study Focus

---

---

Home Study Completed ☐

#### Quiz 2

Q	Topic	$\Sigma$	R	A	G
1	Percentage Problem				
2	Simultaneous Equations				
3	Surface Area Problem				
4	Averages from a Table				

#### Home Study Focus

---

---

Home Study Completed ☐

#### Quiz 3

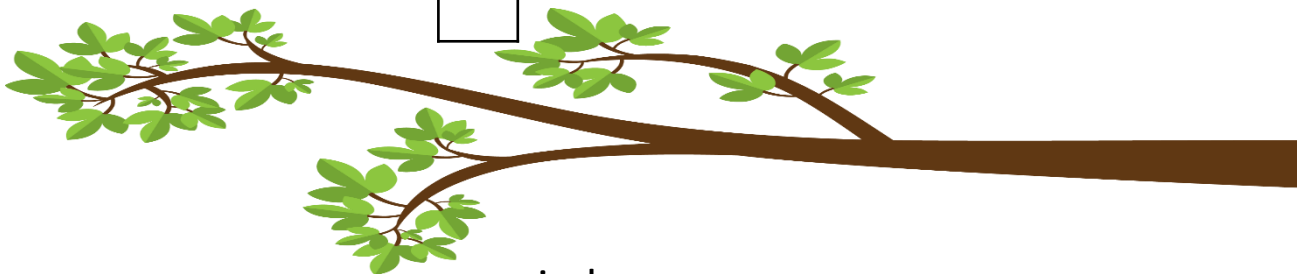
Q	Topic	$\Sigma$	R	A	G
1	Ratio Problem				
2	Expand and Simplify				
3	Right Angled Trigonometry				
4	Cumulative Frequency				

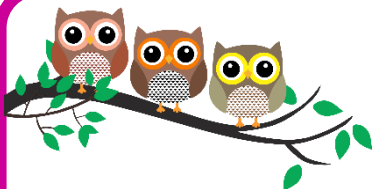
#### Home Study Focus

---

---

Home Study Completed ☐





# Higher Interleaving Quiz



## Branch 12 Quiz 1

- 1) Express 504 as a product of prime factors in index form.

(3 marks)

---

---

---

2)

- a) Factorise Fully  $18x^2y + 12y^2$  (2 marks)

---

---

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

- b) Solve  $x^2 + 2x - 35 = 0$  (3 marks)

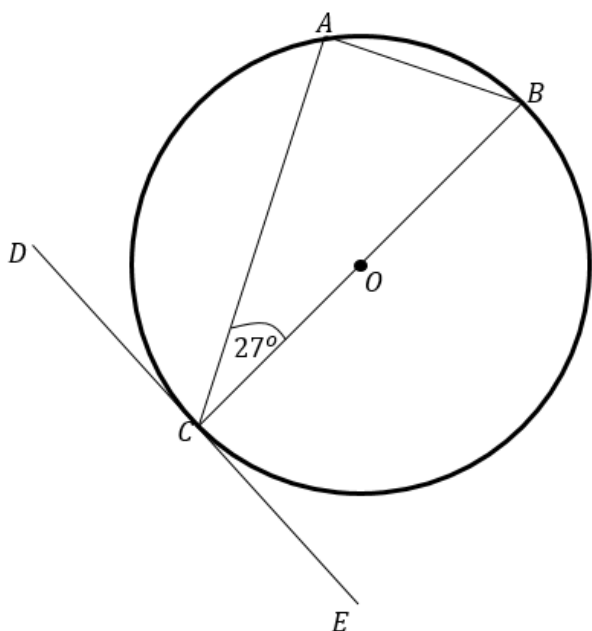
---

---

---

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

3)



- 3) Find the size of angle DCA.  
Give a reason for your answer.

(3 marks)

---

---

---

---

---

---

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

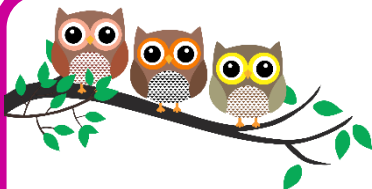
- 4) There are 8 biscuits in a tin. 5 digestives and 3 ginger nuts. Mrs D picks out and eats two biscuits at random from the tin. Calculate the probability of selecting two different biscuits. (4 marks)

---

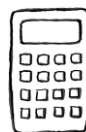
---

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

Q	Topic	$\Sigma$	R	A	G
1	Product of Prime Factors				
2	Factorise and Solve				
3	Circle Theorems				
4	Probability Tree				



# Higher Interleaving Quiz



## Branch 12 Quiz 2

- 1) In 2010 there were 20 million computer tablets shipped around the world.  
In 2017 there were 163 million computer tablets shipped around the world.  
Calculate the percentage increase. **(3 marks)**

---

---

---

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

- 2) Mrs Quinn buys 30 bags of flour for food tech.  
There are  $x$  bags that weigh 1.5kg each.  
There are  $y$  bags that weigh 2kg each.  
a) Write down an equation connecting  $x$  and  $y$ .

**(1 mark)**

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

- b) The total weight of the bags is 54kg  
Use algebra to work out the values of  $x$  and  $y$ .  
You must show your working out. **(3 marks)**

---

---

---

---

---

---

---

---

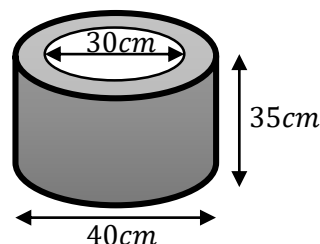
---

---

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

- 3) A iron tube needs to be painted with rust protection. Calculate the surface area of the tube which needs to be painted.

**(5 marks)**



---

---

---

---

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

- 4) There are 300 runners in the Edinburgh marathon. **(3 marks)**

Time ( $t$ ) in mins	Frequency
$180 < t \leq 200$	20
$200 < t \leq 260$	100
$260 < t \leq 300$	180
$t > 300$	0

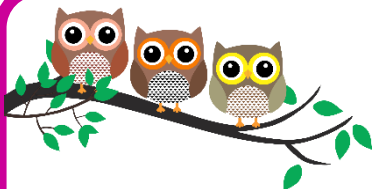
Estimate the mean time

---

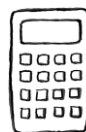
---

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

Q	Topic	$\Sigma$	R	A	G
1	Percentage Problem				
2	Simultaneous Equations				
3	Surface Area Problem				
4	Averages from a Table				



# Higher Interleaving Quiz



## Branch 12 Quiz 3

- 1) Adam, Jake and Sally share sweets in the ratio of 3: 5: 7

Adam has 104 less sweets than Sally.

How many sweets does Jake have?

(3 marks)

---



---



---



---

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

- 2) Expand and Simplify

$$(x + 1)(x + 2)^2$$

(4 marks)

---



---



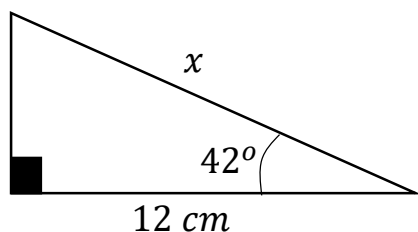
---



---

- 3) Work out the length of  $x$

(2 marks)




---



---



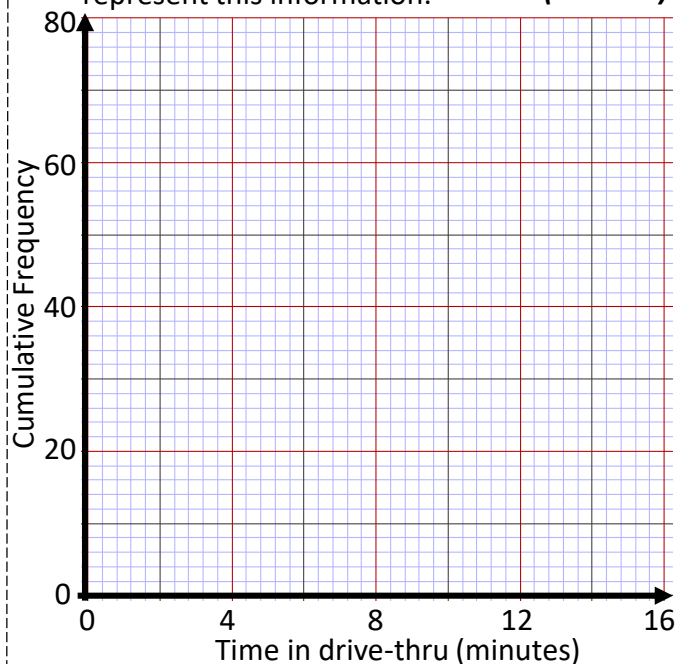
---

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

- 4 The times that 60 customers waited in a drive-thru are given in the frequency table.

Time ( $t$ ) in mins	Frequency		
$0 < t \leq 2$	3		
$2 < t \leq 4$	12		
$4 < t \leq 6$	25		
$6 < t \leq 10$	14		
$10 < t \leq 16$	6		

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



- b) Use your graph to find an estimate for the interquartile range. (3 marks)

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

Q	Topic	$\Sigma$	R	A	G
1	Ratio Problem				
2	Expand and Simplify				
3	Right Angled Trigonometry				
4	Cumulative Frequency				