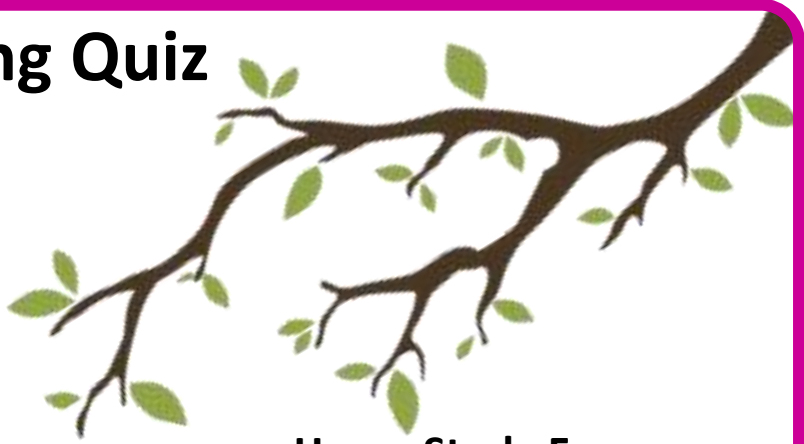
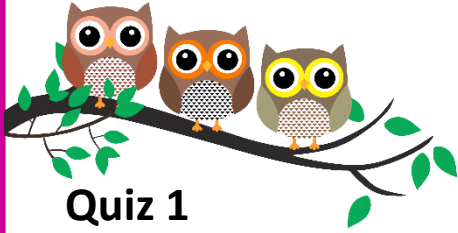


# Higher Interleaving Quiz

## Branch 8

### Quizzes 1 to 3



### Home Study Focus

#### Quiz 1

| Q | Topic                     | $\Sigma$ | R | A | G |
|---|---------------------------|----------|---|---|---|
| 1 | Proportion Problem        |          |   |   |   |
| 2 | Difference of two squares |          |   |   |   |
| 3 | Transformation Graph      |          |   |   |   |
| 4 | Cumulative Frequency      |          |   |   |   |
|   |                           |          |   |   |   |

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Home Study Completed

#### Quiz 2

| Q | Topic                 | $\Sigma$ | R | A | G |
|---|-----------------------|----------|---|---|---|
| 1 | Reverse Percentage    |          |   |   |   |
| 2 | Iteration             |          |   |   |   |
| 3 | Trigonometry          |          |   |   |   |
| 4 | Averages from a Table |          |   |   |   |
|   |                       |          |   |   |   |

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Home Study Completed

#### Quiz 3

| Q | Topic              | $\Sigma$ | R | A | G |
|---|--------------------|----------|---|---|---|
| 1 | Recurring Decimals |          |   |   |   |
| 2 | Inequalities       |          |   |   |   |
| 3 | Similar Shapes     |          |   |   |   |
| 4 | Venn Diagrams      |          |   |   |   |
|   |                    |          |   |   |   |

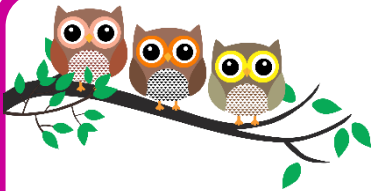
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Home Study Completed



# Higher Interleaving Quiz



## Branch 8 Quiz 1

1) A farm used 48 workers to plant carrots in a field. The field measured 60 acres and the work was completed in 20 days. The farm is asked to prepare another field measuring 90 acres. This work has to be completed in 30 days. Calculate the least number of workers the farm should employ for this work. **(3 marks)**

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

2) Simplify fully

$$\frac{x^3 - 9x}{2x + 6}$$

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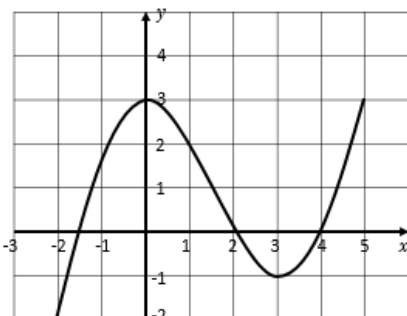
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Answer: \_\_\_\_\_

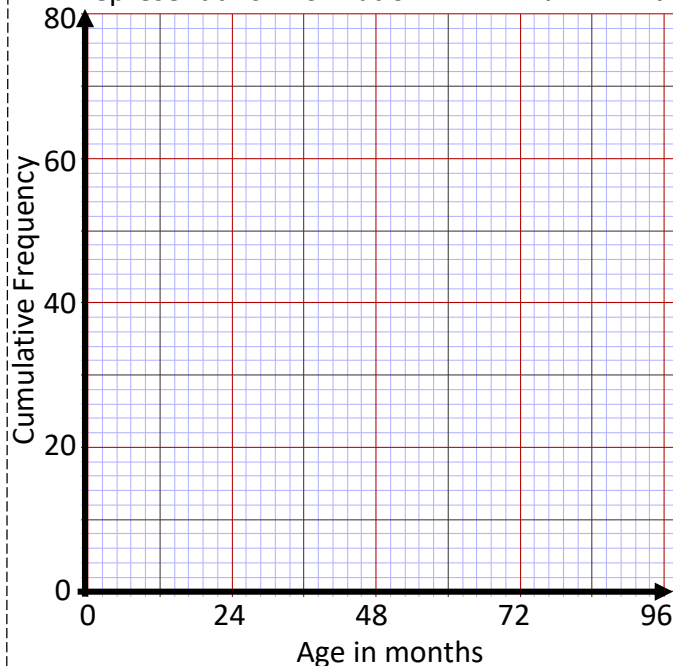
3) Here is the graph of the function  $f(x)$ . Draw the graph  $f(x) + 2$



4) This frequency table gives information about the ages of 60 rabbits.

| Age ( $A$ ) in months | Frequency |  |  |
|-----------------------|-----------|--|--|
| $0 < A \leq 12$       | 7         |  |  |
| $12 < A \leq 48$      | 12        |  |  |
| $48 < A \leq 60$      | 23        |  |  |
| $60 < A \leq 72$      | 13        |  |  |
| $72 < A \leq 96$      | 5         |  |  |

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

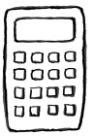
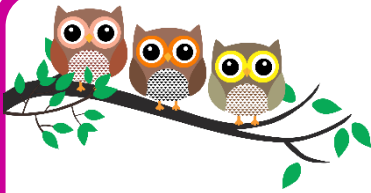


b) Estimate the number of rabbits who are older than 36 months. **(2 marks)**

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

| Q | Topic                     | $\Sigma$ | R | A | G |
|---|---------------------------|----------|---|---|---|
| 1 | Proportion Problem        |          |   |   |   |
| 2 | Difference of two squares |          |   |   |   |
| 3 | Transformation Graph      |          |   |   |   |
| 4 | Cumulative Frequency      |          |   |   |   |

# Higher Interleaving Quiz



## Branch 8 Quiz 2

- 1) The population of bunny rabbits decreased by 12% due to an outbreak of myxomatosis. After the outbreak there were 1.32 million bunnies. How many were there before the outbreak. **(3 marks)**

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

- 2) a) Show that  $x^3 + 7x - 2 = 55$  has a solution between 3 and 4. **(2 marks)**

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An approximate solution to an equation is found by using this iterative process.

$$X_n = \sqrt[3]{57 - 7X_n}$$

And  $X_0 = 3$

- b) Work out the values of  $X_1$  and  $X_2$ . **(2 marks)**

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$X_1$ : \_\_\_\_\_

$X_2$ : \_\_\_\_\_

- c) Work out the solution to 3 decimal places. **(1 mark)**

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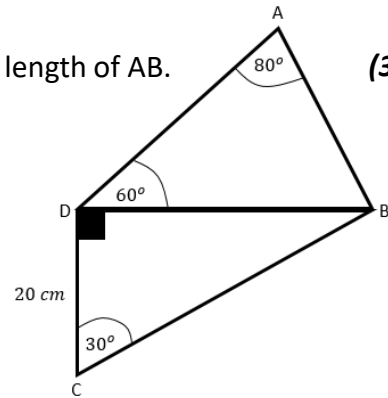
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Answer: \_\_\_\_\_

- 3) Find the length of AB. **(3 marks)**




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

- 4) Bunny rabbits hopped a race to decide which bunnies should be allowed to be the Easter Bunny. It was decided anyone below the mean average time would not be allowed to be an Easter bunny. Calculate the qualification time. **(4 marks)**

| Time ( $t$ ) in mins | Frequency |
|----------------------|-----------|
| $0 < t \leq 10$      | 8         |
| $10 < t \leq 15$     | 15        |
| $15 < t \leq 20$     | 17        |
| $20 < t \leq 30$     | 0         |

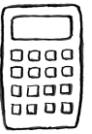
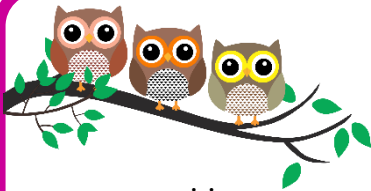
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| Q | Topic                 | $\Sigma$ | R | A | G |
|---|-----------------------|----------|---|---|---|
| 1 | Reverse Percentage    |          |   |   |   |
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| 4 | Averages from a Table |          |   |   |   |

# Higher Interleaving Quiz



## Branch 8 Quiz 3

1) Express  $0.\dot{2}\dot{3}$  as a fraction in its simplest form.

(3 marks)

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

2) a) Solve  $5x + 12 \geq 8$

(2 marks)

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

b) Solve  $14 - 2x < 23$

(2 marks)

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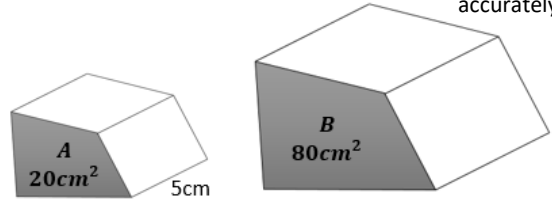
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Answer: \_\_\_\_\_

3) Below are two bunny hutches. Calculate the volume of hutch B.

(5 marks)

Diagram NOT accurately drawn




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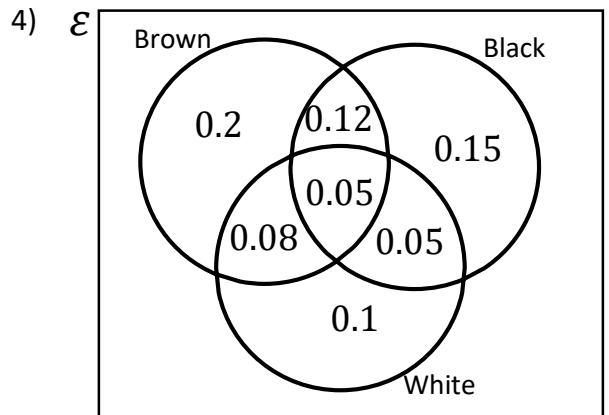


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Answer: \_\_\_\_\_



The Venn Diagram shows some of the different colours of fur bunnies have.

A sample of 420 bunnies is taken. Calculate the proportion of the bunnies that do not have any brown, black or white fur.

(3 marks)

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

| Q | Topic              | $\Sigma$ | R | A | G |
|---|--------------------|----------|---|---|---|
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| 2 | Inequalities       |          |   |   |   |
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