Foundation Interleaving Quiz
Branch 3
Quizzes 1 to 3
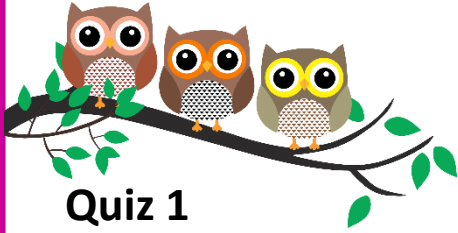
Quiz 1

Q	Topic	∑	R	A	G
1	Fraction Problem				
2	Function Machines				
3	Angle Problem				
4	Probability				

Home Study Focus

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Home Study Completed ☐

Quiz 2

Q	Topic	∑	R	A	G
1	Ratio Problem				
2	Solve Equations				
3	Circles				
4	Mean from a Table				

Home Study Focus

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Home Study Completed ☐

Quiz 3

Q	Topic	∑	R	A	G
1	Percentage Problem				
2	Expand and Simplify				
3	Pythagoras' Theorem				
4	Frequency Tree				

Home Study Focus

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Home Study Completed ☐
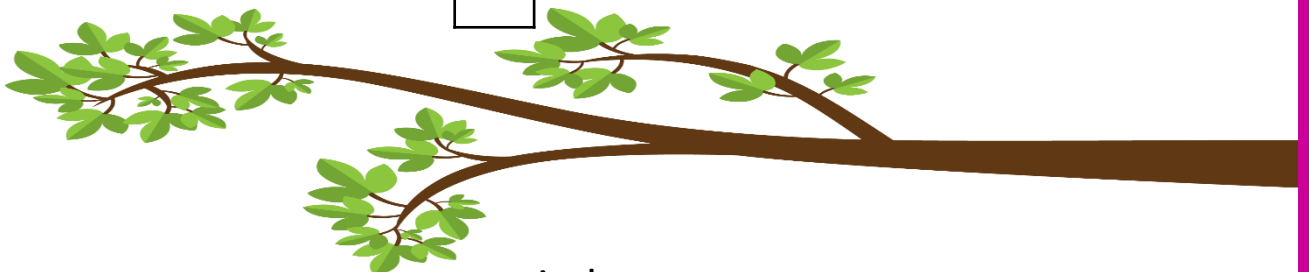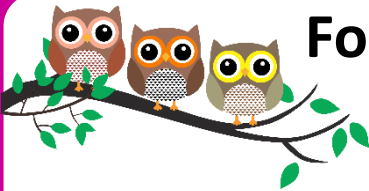
1) 60 girls and 140 boys were asked if they walk to school.

Altogether $\frac{3}{4}$ of the students said yes.

$\frac{2}{3}$ of the girls said yes.
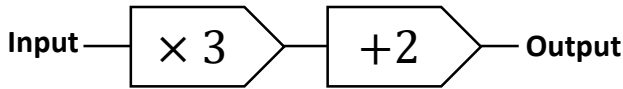
What fraction of the boys said yes? **(4 marks)**

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Answer: _____

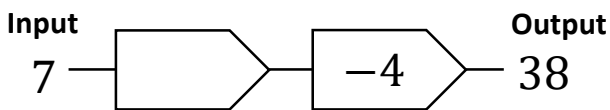2) Below is a function machine

Input — $\times 3$ — $+2$ — Output

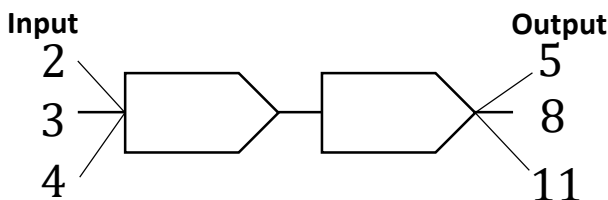a) What is the output when the input is $\frac{1}{2}$?

(1 mark)

Answer: _____

b) What is the input when the output is -4?

(1 mark)

Answer: _____

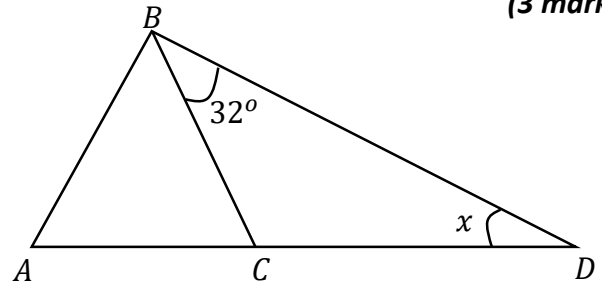c) Complete the empty box in the function machine below. **(1 mark)**

Input 7 — [ ] — -4 — Output 38

d) When the numbers 2, 3, 4 are inputs, the outputs are 5, 8, 11. Create a 2 step function machine for this. **(2 marks)**

Input 2, 3, 4 — [ ] — [ ] — Output 5, 8, 11

3) The diagram shows a triangle ABD and an equilateral triangle ABC. Work out the size of x.

(3 marks)

B, 32°, x, A, C, D

_____

_____

_____

Answer: _____

4) There are only red, green, yellow and blue counters in a bag.

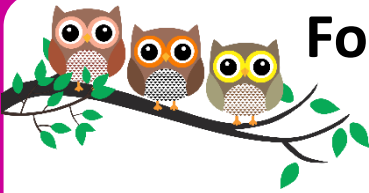| Colour	Red	Green	Yellow	Blue
Probability	0.3		0.15	0.5

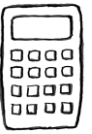a) Work out the probability of selecting a green counter. **(1 mark)**

Answer: _____

b) There are 150 counters in the bag. Work out the number of red counters in the bag. **(2 marks)**

Answer: _____

Q	Topic	Σ	R	A	G
1	Fraction Problem				
2	Function Machines				
3	Angle Problem				
4	Probability				

1) In year 11 at school the ratio of
$$girls:boys = 5:9$$
There are 72 more boys than girls.
Work out the total number of students in year 11.
(3 marks)

Answer: _____

2) Solve
a) $2x + 7 = 18$ *(2 marks)*

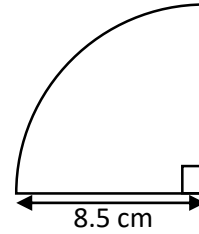Answer: _____

b) $\frac{x}{4} - 5 = -7$ *(2 marks)*

Answer: _____

c) $3x^2 = 12$ *(2 marks)*

Answer: _____

3) The diagram shows a quarter-circle with a radius of 8.5 cm. Work out the area of the quarter circle.
(3 marks)

8.5 cm

Answer: _____

4) The table shows information about the marks of 40 students in a test. *(3 marks)*

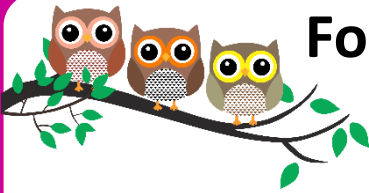| Mark	Frequency
21	4
22	11
23	6
24	14
25	5

Students who scored less than the mean mark have to retake the test.
How many students have to retake the test?

Answer: _____

Q	Topic	$\sum$	R	A	G
1	Ratio Problem				
2	Solve Equations				
3	Circles				
4	Mean from a Table				

Foundation Interleaving Quiz
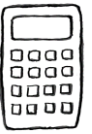
Branch 3 Quiz 3

1) Jack wants to buy a new smart phone for £495. He has already saved £108.
Each week he earns £60.
He saves 40% of his earnings.
How many more weeks must he save for? **(4 marks)**

_____

_____

_____

Answer: _____

2)
a) Show that **(2 marks)**
$$5(a-4) - 2(a-6) = 3a - 8$$

_____

_____

_____

b) Expand and simplify **(2 marks)**
$$(x+3)(x-7)$$

_____

_____

Answer: _____

3) Calculate the length of the side AC.
Give your answer to 1 decimal place. **(2 marks)**
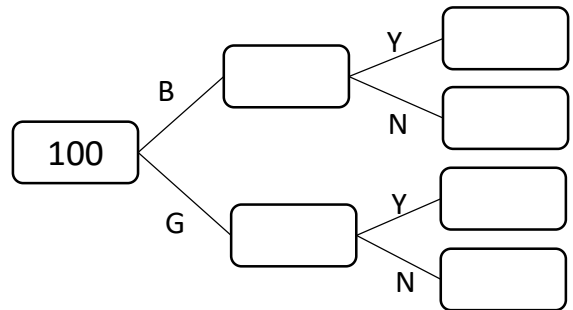
B ——11 cm—— C

6 cm

A

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_____

_____
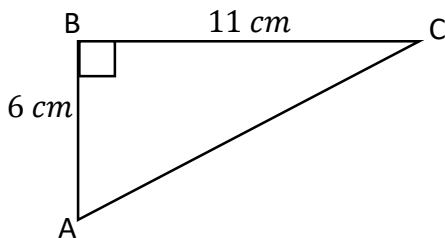
Answer: _____

4) 100 students in took part in a survey on whether they have school dinners or not.
48 students were girls.
Boys said yes and no to having school dinners in the ratio of 3:1
66 students said yes to having school dinners in total.

a) Complete the frequency tree. **(3 marks)**

100 — B → [ ] — Y → [ ]
             — N → [ ]
    — G → [ ] — Y → [ ]
             — N → [ ]

_____

_____

_____

b) What proportion of the students have school dinners? **(2 marks)**

_____

_____

_____

_____

Answer: _____

Q	Topic	Σ	R	A	G
1	Percentage Problem				
2	Expand and Simplify				
3	Pythagoras' Theorem				
4	Frequency Tree				