

M1.

$$\frac{180}{3000} \text{ or } \frac{18}{300}$$

or 1kg = 1000g seen or implied

*oe fraction**eg 3000 or 0.18 seen***B1**

$$\frac{3}{50}$$

B1ft**[2]****M2.(a)** Shades 12 squares**B1****Additional Guidance**

Mark intention, positive marking

(b) Identifies $\frac{2}{5}$ and $\frac{8}{20}$ *B1 for one correct**or one correct and one incorrect**or two correct and one incorrect***B2****[3]****M3.**

$$112 \div 210$$

$$112 \div 210 \times 100$$

M1

$$132 \div 240$$

$$132 \div 240 \times 100$$

M1

0.53.... **and** 0.5553... (%) **and** 55(%)

A1

Their 0.53.... **and** their 0.55 **and** Year 11*Their 53....(%) **and** their 55(%) **and** Year 11**Strand (iii)**M2 and correct decision for their decimals or percentages*

Q1

Alternative 1

$$210 \div 112$$

$$210 \div 112 \times 100$$

M1

$$240 \div 132$$

$$240 \div 132 \times 100$$

M1

1.875 **and** 1.8(18...)187.5(%) **and** 181.8...(%)

A1

Their 1.875 **and** their 1.8(18...) **and** Year 11*Their 187.5(%) **and** their 181.8...(%) **and** Year 11**Strand (iii)**M2 and correct decision for their decimals or percentages*

Q1

Alternative 2

$$(210 - 112) \div 210$$

$$(210 - 112) \div 210 \times 100$$

M1

$$(240 - 132) \div 240$$

$$(240 - 132) \div 240 \times 100$$

M1

0.46.....(or 0.47) **and** 0.4546....(%) (or 47(%)) **and** 45(%)

A1

Their 0.46.....(or 0.47) **and** their 0.45 **and** Year 11*Their 46....(%) (or 47(%)) **and** their 45(%) **and** Year 11*

Strand (iii)

M2 and correct decision for their decimals or percentages

Q1

Alternative 3

$$210 \div (210 - 112)$$

$$210 \div (210 - 112) \times 100$$

M1

$$240 \div (240 - 132)$$

$$240 \div (240 - 132) \times 100$$

M1

2.1(4...) **and** 2.2(2...)

21.4...(**%**) **and** 22.2...(**%**)

A1

Their 2.1(4...) **and** their 2.2(2...) **and** Year 11

Their 214.(...) (**%**) **and** their 222.(...) (**%**) **and** Year 11

Strand (iii)

M2 and correct decision for their decimals or percentages

Q1

Alternative 4

$$\frac{112}{210} \text{ and } \frac{132}{240}$$

M1

Equates denominators with at least one correct numerator

M1

$$\frac{32}{60} \text{ and } \frac{33}{60}$$

$$\text{oe } \frac{16}{30} \text{ and } \frac{16.5}{30}$$

A1

Their $\frac{210}{112}$ **and** their $\frac{240}{132}$ **and** Year 11

oe

Strand (iii)

M2 and correct decision for their fractions

Q1

Alternative 5

$$112 : 210 \text{ and } 132 : 240$$

M1

Equates one side of ratio with at least one correct on other side

$$1 : \frac{210}{112} \text{ and } 1 : \frac{240}{132}$$

$$\frac{112}{210} : 1 \text{ and } \frac{132}{240} : 1 \text{ oe}$$

M1

16 : 30 and 16.5 : 30

oe

A1

Their 16 : 30 and their 16.5 : 30 and Year 11

Strand (iii)

M2 and correct decision for their ratios

Q1

Alternative 6

112 : (210 – 112)

and 132 : (240 – 132)

M1

8 : 7 and 11 : 9

M1

72 : 63 and 77 : 63

oe

A1

Their 72 : 63 and their 77 : 63 and Year 11

Strand (iii)

M2 and correct decision for their ratios

Q1

Alternative 7

210 : (210 – 112) and

240 : (240 – 132)

M1

15 : 7 and 20 : 9

M1

135 : 63 and 140 : 63

oe

A1

Their 135 : 63 and their 140 : 63 and Year 11

Strand (iii)

M2 and correct decision for their ratios

Q1

[4]

M4.(a) 7 + 8 or 15

M1

$$\frac{15}{20}$$

May be implied

A1

$$\frac{3}{4}$$

ft their fraction simplified to lowest terms

B1ft

(b) 8 + 1 or 9 seen or implied

M1

$$\frac{9}{20} \text{ oe}$$

$$\text{SC1 } \frac{11}{20} \text{ oe}$$

A1

[5]

M5. (a) 120 - 97 or 89 - 70 + 31 - 27
oe or 19 or 4 seen

M1

$$23$$

SC1 answer 46

A1

(b) 15

for Wednesday

B1

24

for Thursday

B1

- (c) $\frac{30}{120}$ seen
 oe fraction, decimal, percentage

M1

$\frac{1}{4}$

SC1 $\frac{15}{43}$

SC1 any seen fraction correctly cancelled to simplest form

A1

- (d) $\frac{50}{150}$ or attempts to make a comparison
 Seen or implied

M1

$\frac{1}{3}$ or $\left(\frac{1}{4} = \right) \frac{50}{200}$ or both values correct in appropriate comparison
 Fraction/decimal/percentage

A1

Their yes with fractions with either same numerator (oe)
 or same denominator
 or with both values as decimals or both values as percentages
 or appropriate diagrams

Strand (iii)

Supporting answers with explanations and evidence

ft their $\frac{1}{4}$ from 3c and their $\frac{1}{3}$

Q1

Alternative method

$$\frac{150}{4}$$

May be implied by diagram

M1

37.5

A1

Yes ($50 > 37.5$)

Q1

[9]

M6. Attempts to process one piece of information

eg $2 : 9$ or $4 : 16$

$0.22\dots$ or 0.25

$$\frac{6}{27} = \frac{2}{9} \quad \text{or} \quad \frac{8}{32} = \frac{4}{16}$$

$$\frac{6}{27} \times 100 \quad \text{or} \quad \frac{8}{32} \times 100$$

$$\frac{24}{108} \quad \text{or} \quad \frac{24}{96} \quad \frac{192}{864} \quad \text{or} \quad \frac{216}{864}$$

or 8 goals in 32 games is 1 goal every 4 games

$$4\frac{1}{2} \quad \text{or} \quad 4$$

oe

M1

Writes both pieces of information in a form that allows for comparison

eg $2 : 9$ and $2 : 8$

$0.22\dots$ and 0.25

($1 : 4.5$ and $1 : 4$ are acceptable)

$$4\frac{1}{2} \quad \text{and} \quad 4$$

$$\frac{2}{9} \quad \text{and} \quad \frac{2}{8} \quad \frac{24}{108} \quad \text{and} \quad \frac{24}{96}$$

$$\frac{8}{36} \quad \text{and} \quad \frac{9}{36} \quad \frac{192}{864} \quad \text{and} \quad \frac{216}{864}$$

oe

A1

Correct decision from their working

Strand (iii) Dependent on M1

Q1

[3]

M7. (a) $\frac{3}{10}$

B1 equivalent fraction to $\frac{3}{10}$ eg $\frac{5}{50}$
or

B1 $\frac{n}{50}$ with its correct simplest form

B2

(b) At least one product attempted or one correct value (not 0 or 8)

$$0 \times 13$$

$$1 \times 8$$

$$2 \times 6 (= 12)$$

$$3 \times 8 (= 24)$$

$$4 \times 15 (= 60)$$

M1

5 products attempted and added

Allow 4 products if 0 not shown

M1 dep

104

oe eg 4 more

SC2 117

A1

[5]

M8. (a) (i) 4, 3, 12, 9
B1 three correct

B2

28

ft frequencies or correct from tallies

B1 ft

(ii) $\frac{\text{their 4}}{\text{their 28}}$
 oe

B1 ft

$\frac{1}{7}$

ft correct cancelling of any fraction

B1 ft

(b) Symbol represents 2 birds

B1

Correct number of symbols for

blackbird (3)

starling $\left(2\frac{1}{2}\right)$

sparrow $\left(1\frac{1}{2}\right)$

ft their key or correct

(not symbol = 1 unless 2 more symbols added in robin row)

B1 ft for one or two rows correct

Allow half bird cut anywhere

B2 ft

Their completed pictogram, symbols aligned

Strand (ii)

Logical organised working

Q1

(c) 8 000 000

B1

8 million \div 500 000 or their 8 000 000 \div 500 000
 oe eg $8 \div 0.5$
Digits 16 implies M1

M1

16

ft their 8 000 000 in digits

SC1 $\frac{1}{16}$ or 0.0625

A1 ft

(d) blackbird (flies away)

B1

robin (arrives)

B1

Accept any clear indication eg B, R
 SC1 answers wrong way round
 SC1 Robin 4, Blackbird 3

[14]

M9. (a) 1.99×6 or $199 \times 6 (= 1194)$

M1

11.94

SC1 119.40
 SC1 12 (.00)

A1

(b) $\frac{1}{2}$

B1 equivalent fraction to $\frac{1}{2}$ eg $\frac{30}{60}$

or B1 $\frac{n}{60}$ seen with its correct simplest form

SC1 50%

SC1 0.5

B2

(c) 10% circled

Any clear indication

B1

(d) Questionnaire/survey/interview

oe telephone everyone

B1

[6]