M1.
(a) Yes, gives correct answer as inverse operations and order does not matter oe
(b) No, does not work, inverse operations not in correct order oe

M2.(a) 10 (ice creams) and 7 (lollies) chosen
their $10 \times 1.2(0)$ or $12(.00)$
or their $10 \times 120$ or 1200
and
their $7 \times 0.8(0)$ or 5.6(0)
or their $7 \times 80$ or 560
17.6 or 1760 or $£ 17.60$ p implies B1 M1
17.60

Strand (i)
ft correct answer with correct money notation for their 10 and their 7
SC2 16.40
SC1 16.4 or 12 or 5.60
(b) $10+7+15+18$ or 50

Allow 1 error


Bars that total 30 or 80 - their 50

Bars for 14 ice creams and 16 lollies
SC1 Bars with two more Iollies than ice creams with no M marks awarded

M3.(a) 15 and 10 in either order
B1 15 with a number less than or equal to 15
or two numbers with a total of 25
(b) 17 and 11 in either order

B1 two numbers giving a range of 6 for set $C$ or two numbers with a total of 28

M4.(a) Yes she's asking people who own dogs so they prefer them
oe Yes she should ask people who don't own dogs / pets
(b) No preference $=6$

Dogs + Cats + No preference $=30$
8, 16, 6 scores B3

M5.5(.00) - $2.6(0)$ or $2.4(0)$ or 240
May be implied
their $240 \div 80$
or
builds up to their 240 eg $80+80+80$ or $3 \times 80$
oe

3
Must see correct method
SC2 Answer only of 3

## Alternative method

$2.60+80$
or
$5(.00)-80$
$2.60+80+80+80$
or
$5(.00)-80-80-80$

M6.

$$
\begin{aligned}
& 4 \div 4+4 \div 4 \\
& \text { or } \\
& 4 \times 4 \div(4+4) \\
& \text { or } \\
& (-4-4) \div 4+4 \\
& \text { or } \\
& 4 \div((4+4) \div 4) \\
& \text { or } \\
& (4 \div(4+4)) \times 4
\end{aligned}
$$

Any correct calculation
$(4+4+4) \div 4$
or
$(4 \times 4-4) \div 4$

> Any correct calculation

M7.
Any three of $1+$
$2+3+4=101 \times$
$2 \times 3+4=101+$ $2+3 \times 4=151+$ $2 \times 3 \times 4=25$

B1 for each

M8.3 10p coins
2 20p coins
5 50p coins

> B2 any 10 coins totalling $£ 3.20$
> eg $6 \times 20 p, 4 \times 50$ p
> eg $4 \times 5 p, 6 \times 50$ p
> or any combination of 50 p, 20p and 10 p coins totalling $£ 3.20$
> eg $2 \times 10 p, 5 \times 20 p, 4 \times 50$ p
> or $30 p, 40$ p and $£ 2.50$ on answer lines without correct number of coins seen

B1 any number of coins totalling $£ 3.20$
eg $2 \times 5 p, 1 \times 10 p, 6 \times 50 p$
eg $1 \times 10 p, 3 \times 20 p, 5 \times 50 p$
or 10 coins using any combination of $50 p, 20 p$ and 10p coins totalling
$£ 3.00$ or $£ 3.10$ or $£ 3.30$ or $£ 3.40$
eg $2 \times 10 p, 3 \times 20 p, 5 \times 50 p$

## Additional Guidance

10 coins using combination of 10 p, 20p and 50 p coins totalling $£ 3.00, £ 3.10$, $£ 3.30$ or $£ 3.40$

| 110p | 210p | $410 p$ | $110 p$ | $210 p$ | B1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2 20p | $320 p$ | $120 p$ | $520 p$ | $420 p$ |  |
| 550p | $550 p$ | $550 p$ | $450 p$ | $450 p$ |  |

M9.5 $\times 24$ or 120

## Additional Guidance

$$
(204-24) \text { and } 180 \div 4=45 \text { is } \mathrm{MO}
$$

M10.(a) $2700 \times 8$ or 21600
or $2700 \times 0.08$
or 216
oe

5850-2700
or 3150
oe
$(5850-2700) \times 5$
or their $3150 \times 5$
or 15750
$(5850-2700) \times 0.05$
or their $3150 \times 0.05$
or 157.5
or digits 3735
dependent on 2nd M1
373.5 implies M3 Q0

## Additional Guidance

373.50 p is M 1 M 1 M 1 Q 0
(b) $7(\%)$

M11.(a) (£) 3.74

## Additional Guidance

£3.74p
3.74p

374 p with $£$ sign crossed out
374 p without $£$ sign crossed out
(b) $1.99+1.7+0.55$ or 4.24
oe
Allow one error

5 - their 4.24 or 0.76
oe

76
$£ 0.76$

## Additional Guidance

Allow a mixture of units for the $M$ marks
76 peen in working, 0.76 on answer line
M1M1A1

M12.
(a) $(17+3) \div 4$
$20 \div 4$

5
SC1 17.75
(b) $18,19,20$

B2 All 3 correct answers with extra incorrect answers or any 2 correct answers with or without extra incorrect answers
B1 1 correct answer with or without extra incorrect answers or any correct reverse trial starting with a number between 5 and 6

M13.100-(27 + 41) oe

Correct minimum numbers for their 32
ft from their 32
B1 buys beads to make each number of each colour equal
$R=14, B=0, G=9$ scores 4 marks
or two correct minimum numbers for their 32
$S C 2 R=14$ and $B=0$
SC1 $R=14$
B2ft
[4]

M14.
(a) $1+2 \times 4$ or $1+4 \times 2$ or $4+1 \times 5$ or $4+5 \times 1$ or $5+4 \times 1$ or $5+1 \times 4$
(b) $4 \times 3-1 \times 5$ or $4 \times 3-5 \times 1$
or $5 \times 3-2 \times 4$ or $5 \times 3-4 \times 2$
3 is placed in question so other answers are irrelevant
B1 for any correct expression i.e. not using given numbers or repetition or correct expression but with '3' moved from
position.
e.g. $3 \times 5-1 \times 8$
$3 \times 3-1 \times 2$
Negative answer B0
(c) $3+4+5=12$

B1 for any correct expression using 'incorrect' digits e.g. 0 or repeating digits
e.g. $1+4+5=10$

M15.3 $\times 102$ or 100 seen

