

1. (a) Simplify

(i) $c + c + c + c$

.....

(ii) $p \times p \times p \times p$

.....

(iii) $3g + 5g$

.....

(iv) $2r \times 5p$

.....

(4)

(b) Expand

$5(2y - 3)$

.....

(1)

(Total 5 marks)

2. (a) Simplify $5p + 2q - 3p - 3q$

.....

(2)

$$y = 5x - 3$$

(b) Find the value of x when $y = 4$

$$x = \dots\dots\dots$$

(2)

(Total 4 marks)

3. (a) Simplify $4x + 7y + 2x - 3y$

$$\dots\dots\dots$$

(2)

(b) Simplify $2pq + pq$

$$\dots\dots\dots$$

(1)

(Total 3 marks)

4. (a) Simplify $y + y$

$$\dots\dots\dots$$

(1)

(b) Simplify $p^2 + p^2 + p^2$

$$\dots\dots\dots$$

(1)

(Total 2 marks)

5. (a) Simplify

(i) $e + f + e + f + e$

.....

(ii) $p^2 + p^2 + p^2$

.....

(2)

(b) Work out the value of $5x + 1$ when $x = -3$

.....

(2)

(Total 4 marks)

6. The table shows some expressions.

$2(y + y)$	$2y + y$	$2y \times 2y$	$2y + 2y$	$2 + 2y$

Two of the expressions **always** have the same value as $4y$.

Tick (✓) the boxes underneath the **two** expressions.

(Total 2 marks)

7. (a) Simplify $4a + 5b - 3b + a$

..... (2)

(b) Simplify $x^3 + x^3$

..... (1)
(Total 3 marks)

8. Simplify

(i) $5g - 2g$

(ii) $p \times p$

(Total 2 marks)

CM8;CM9;CM25;CM11;CM12;CM13;CM14;CM15;CM16;CM18;question Char Char Char Char
 Char Char Char Char Char Char Char Char Char Char Char Char Char Char Char Char Char Char Char Char Char
 Char Char;question Char Char Char Char;question Char Char Char Char Char Char Char Char;question
 Char Char Char Char Char Char Char Char Char Char Char Char Char Char Char Char Char;Bottom;BoxL;BoxR;**9**.
 Simplify

(a) $c + c + c$

..... (1)

(b) $e + f + e + f + e$

..... (1)

(c) $2a + 3a$

..... (1)

(d) $2xy + 3xy - xy$

..... (1)

(e) $3a + 5b - a + 2b + 8$

(2)
 (Total 6 marks)

10. (a) Solve $3x = 12$

$x =$ (1)

(b) Simplify $4 \times p \times q$

.....
(1)
(Total 2 marks)

11. (a) Simplify $m + m + m + m$

.....
(1)

(b) Simplify $p \times q \times 4$

.....
(1)

(c) Expand $5(3x - 2)$

.....
(1)

(d) Expand $3y(y + 4)$

.....
(2)
(Total 5 marks)

12. (a) Simplify

$$2x \times y \times 3$$

..... (1)

(b) Simplify

$$5x + 3y - 2x + y$$

..... (2)

(c) Multiply out

$$5(3x + 7)$$

..... (1)
(Total 4 marks)

13. Simplify

(i) $c + c + c + c$

.....

(ii) $p \times p \times p \times p$

.....

(iii) $2r \times 5p$

.....

(Total 3 marks)

14. Simplify

(i) $3g + 5g$

.....

(ii) $2r \times 5p$

.....

(Total 2 marks)

15. (a) Simplify

(i) $3e + 2e - e$

.....

(ii) $p \times q \times 5$

.....

(2)

(b) Multiply out $7(2x - 1)$

.....

(1)

(Total 3 marks)

16. (a) Simplify

$5m + 7m$

.....

(1)

(b) Multiply out

$3(2p - 5)$

.....

(1)

(Total 2 marks)

17. (a) Simplify

$$x + x + x$$

..... (1)

(b) Simplify

$$2e \times 3f$$

..... (1)
(Total 2 marks)

18. (a) Work out $60 \times \frac{2}{3}$

..... (2)

(b) Work out the value of $5t^2 - 7$ when $t = 3$

..... (2)

(c) Simplify $4p \times 2q$

..... (1)
(Total 5 marks)

19. (a) Simplify $d + d + d$

..... (1)

(b) Simplify $2c + 4c + c$

..... (1)

(c) Solve $x + 7 = -3$

$x = \dots\dots\dots$ (1)

(d) Solve $5y + 3 = 15$

$y = \dots\dots\dots$ (2)
(Total 5 marks)

20. (a) Simplify $5m + 3m - 2m$

..... (1)

(b) Simplify $p + 7q + 3p - 2q$

..... (2)

(c) Multiply out $3(t - 4)$

..... (1)

(d) Simplify $4a \times 3b$

(1)
(Total 5 marks)

21. Simplify $pq + pq + pq$

..... (Total 1 mark)

22. (a) Simplify $q + q + q$

..... (1)

(b) Simplify $4r + 5t + 7r - 2t$

..... (2)
(Total 3 marks)

23. Simplify

(i) $5g - 2g$

.....

(ii) $p \times p$

(Total 2 marks)

24. Simplify

(a) $c + c + c$

..... (1)

(b) $e + f + e + f + e$

..... (1)
(Total 2 marks)

25. (a) Simplify $4e \times 3f$

..... (1)

(b) Expand $4(2x + 5)$

..... (1)

(c) Simplify $4r - 2t + 3r - 7t$

..... (2)
(Total 4 marks)

26. Simplify

(a) $a + a + a + a$

..... (1)

(b) $2 \times p \times q$

..... (1)

(c) $3a + 4b + a - 2b$

..... (2)
(Total 4 marks)

27. (a) Simplify $g + g + g$

..... (1)

(b) Simplify $5 \times h \times k$

.....
(1)
(Total 2 marks)

28. Expand and simplify $(x + 5)(x + 2)$

.....
(Total 2 marks)

(b) Simplify $5 \times h \times k$

.....
(1)
(Total 2 marks)

29. Simplify $d + d + d + d + d$

.....
(Total 1 mark)

30. (a) Simplify $h + h + h$

..... (1)

(b) Simplify $8k - 3k$

..... (1)

(c) Simplify $2m \times 3p$

..... (1)
(Total 3 marks)

31. (a) Simplify $2k - k$

..... (1)

(b) Simplify $3 \times 4y$

..... (1)

(c) Simplify $a + a + a + b + b$

.....
 (2)
 (Total 4 marks)

32. Simplify

$$x + x + x + x + x$$

.....
 (Total 1 mark)

33. (a) Simplify $m + m + m$

..... (1)

(b) Simplify $y \times y$

..... (1)

(c) Simplify fully $3a - 4b + 2a + 5b$

.....
 (2)
 (Total 4 marks)

1. (a) (i) $4c$ 4
Bl oe

(ii) p^4
Bl cao

(iii) $8g$
Bl oe

(iv) $10pr$
 OR
 $10rp$
Bl

(b) $10y - 15$ 1
Bl cao Accept $10y + -15$

[5]

2. (a) $2p - q$ 2
Bl cao for $2p$
Bl cao for $-q$ accept $(-q + 2p)$, $2p - 1q$ and $2p + -q$

(b) 1.4 2
 $5x = 3 + 4$
M1 for either $(+3$ or $sight$ of $7)$ or $(\div 5$ or $sight$ of 0.8 and $0.6)$
All cao accept $\frac{7}{5}$ or $1\frac{2}{5}$

[4]

3. (a) $6x + 4y$ 2
B1 for either 6x or 4y
B1 cao
- (b) $3pq$ 1
B1 cao (not $3 \times p \times 2$)
- [3]**
4. (a) $2y$ 1
B1 for 2y or $2 \times y$, y^2 , $y \times 2$
- (b) $3p^2$ 1
B1 for $3p^2$ or $3 \times p^2$ or $p^2 \times 3$ or $p^2 3$
- [2]**
5. (a) (i) $3e + 2f$ 2
B1 for $3e + 2f$
- (ii) $3p^2$
B1 for $3p^2$
- (b) -14 2
 $5 \times -3 + 1$
M1 for $5 \times -3 + 1$
A1 for -14
- [4]**
6. $2(y + y)$
 $2y + 2y$ 2
 See diagram
B1 for $2(y + y)$
B1 for $2y + 2y$
(Deduct B1 for each additional tick (> 2) to min 0)
- [2]**
7. (a) $5a + 2b$ 2
B2 cao
(B1 for either 5a or 2b)

	(b)	$2x^3$	<i>Bl cao</i>	1	
					[3]
8.	(a)	$3g$	<i>Bl cao</i>	1	
	(b)	p^2	<i>Bl cao</i>	1	
					[2]
9.	(a)	$3c$	<i>Bl</i>	1	
	(b)	$3e + 2f$	<i>Bl</i>	1	
	(c)	$5a$	<i>Bl</i>	1	
	(d)	$4xy$	<i>Bl</i>	1	
	(e)	$2a + 7b + 8$	<i>B2 for $2a + 7b + 8$ (Bl for either $2a$ or $7b$)</i>	2	
					[6]
10.	(a)	4	<i>Bl cao Accept $\frac{12}{3}$</i>	1	
	(b)	$4pq$	<i>Blcao</i>	1	
					[2]

11. (a) $4m$ 1
B1 for 4m oe
- (b) $4pq$ 1
B1 for 4pq or 4qp or p4q oe
- (c) $\frac{5 \times 3x - 5 \times 2}{15x - 10}$ 1
B1 for 15x - 10 cao
- (d) $\frac{3y \times y + 3y \times 4}{3y^2 + 12y}$ 2
*M1 for $3y \times y + 3y \times 4$ or $3y^2 + a$ or $3y^2 + ay$ or $b + 12y$ or $by^2 + 12y$ where a, b are integers, and can be zero
 A1 for $3y^2 + 12y$ or $3 \times y^2 + 12 \times y$*
- [5]**
12. (a) $6xy$ 1
B1 any order, no \times sign
- (b) $3x + 4y$ 2
B2 (B1 for either 3x or 4y seen) (cannot isw)
- (c) $15x + 35$ 1
B1 cao (cannot isw)
- [4]**
13. (i) $4c$ 1
B1 oe
- (ii) p^4 1
B1 cao
- (iii) $10pr$ or $10rp$ 3
B1
- [3]**

14. (i) $8g$
Bl oe
- (ii) $10rp$
Bl oe (must see 10)
- 2
- [2]**
-
15. (a) (i) $4e$
Bl for 4e or e4
- (ii) $5pq$
Bl
- (b) $14x - 7$
Bl
- 1
- [3]**
-
16. (a) $12m$
Bl
- (b) $6p - 15$
Bl
- 1
- [2]**
-
17. (a) $3x$
Bl
- (b) $6ef$
Bl any order, no \times signs
- 1
- [2]**
-
18. (a) 40
 $60 \times \frac{2}{3}$
MI for 60×2 or 120 seen or $60 \div 3$ or 20 seen
Al cao
- 2
- (b) 38
 $5 \times 9 - 7 = 45 - 7$
MI for $3 \times 3 (= 9)$ or 45 seen
Al cao
- 2

	(c)	$8pq$	<i>B1 accept in any order but must not include \times</i>	1	
					[5]
19.	(a)	$3d$	<i>B1 accept $d3$ or $3 \times d$ or $d \times 3$</i>	1	
	(b)	$7c$	<i>B1 accept $c7$ or $7 \times c$ or $c \times 7$</i>	1	
	(c)	-10	<i>B1 cao</i>	1	
	(d)	2.4 oe		2	
		$5y = 15 - 3$ $y = \frac{15 - 3}{5}$	<i>M1 for $15 - 3$ or 12 seen A1 for 2.4 oe (eg $\frac{12}{5}$)</i>		[5]
20.	(a)	$6m$	<i>B1 for $6m$</i>	1	
	(b)	$4p + 5q$	<i>B2 (B1 for $4p$ or $5q$ seen)</i>	2	
	(c)	$3t - 12$	<i>B1</i>	1	
	(d)	$12ab$	<i>B1</i>	1	[5]

21.	$3pq$	<i>Bl</i>	1	[1]
22.	(a) $3q$	<i>Bl</i>	1	
	(b) $11r + 3t$	<i>B2 for 11r + 3t</i> <i>(Bl for 11r or 3t seen)</i>	2	[3]
23.	(i) $3g$	<i>Bl cao</i>	1	
	(ii) p^2	<i>Bl cao</i>	1	[2]
24.	(a) $3c$	<i>Bl</i>	1	
	(b) $3e + 2f$	<i>Bl</i>	1	[2]
25.	(a) $12ef$	<i>Bl</i>	1	
	(b) $8x + 20$	<i>Bl</i>	1	
	(c) $7r - 9t$	<i>B2 for 7r - 9t</i> <i>(Bl for 7r or -9t)</i>	2	[4]

26. (a) $4a$ 1
B1 accept $4 \times a$
- (b) $2pq$ 1
B1 accept $2qp$
- (c) $4a + 2b$ 2
*B2 accept $4 \times a + 2 \times b$
 (B1 for $4a$ or $2b$ seen, accept $4 \times a$ or $2 \times b$)* [4]
27. (a) $3g$ 1
B1 for $3g$ (accept $g3$ or $3 \times g$ or $g \times 3$)
- (b) $5hk$ 1
B1 for $5hk$ (accept $hk5$ oe) [2]
28. $x^2 + 5x + 2x + 10$ 2
 $= x^2 + 7x + 10$
*B2 cao
 (B1 for x^2 , $5x$, $2x$ and 10 seen irrespective of the sign of each **or**
 3 out of no more than 4 terms with correct signs)
 Because all of the terms of this expansion are positive terms, we
 do not need to see the “+” sign to give credit. Sight of 3 from
 x^2 , $5x$, $2x$, 10 is enough for the M1.
 Some are, however inserting their own negative signs, so watch
 out.
 Note: Sight of $x^2 + 7x$ without working gets B0* [2]
29. $5d$ 1
B1 for $5d$ (accept $d5$, $5 \times d$, $d \times 5$)

30. (a) $3h$ *B1* 1
- (b) $5k$ *B1* 1
- (c) $6mp$ *B1* 1
- [3]**
-
31. (a) k *B1 for k* 1
- (b) $12y$ *B1 for 12y* 1
- (c) $(a + a + a) + (b + b)$
 $3a + 2b$ *B2 for 3a + 2b* 2
(B1 for 3a + kb or for ka + 2b)
- [4]**
-
32. $5x$ *B1 Accept x5 or 5 × x or x × 5 or 5.x* 1
- [1]**
-
33. (a) $3m$ *B1 for 3m (accept m3)* 1
- (b) y^2 *B1 for y² cao* 1
- (c) $5a + b$ *B2 for 5a + b cao* 2
(B1 for 5a or b or 1b)
- [4]**

- In part (a), most success was achieved on (iii) $(3g + 5g)$, closely followed by (i) $(c + c + c + c)$, for which c^4 also had considerable support. The other two parts proved more difficult. $4p$ and 4^p were often seen in part (ii) while $7rp$ and $2r5p$ were popular in part (iv). Part (b) was poorly answered; $7y - 3$ and $10y - 3$, sometimes “simplified” to $7y$, were the most common wrong answers.

2. Paper 2

Algebraic manipulation is not well understood by candidates at the Foundation Tier. This question confirmed this again this year. This question proved too difficult for most candidates. Part (a) was better answered than part (b). Quite often candidates simplified the term in p correctly, simplifying q was more difficult. Relatively few candidates made any attempts at part (b).

Paper 4

It was disappointing that more candidates did not gain both marks in part (a). One mark was often achieved for $2p$ but many gave the answer in the form $2p + -q$. $8p - 5q$ was a common incorrect response. In part (b) many of those who correctly substituted $y = 4$ were unable to solve the equation correctly and it was common to see “ $4 = 5x - 3$ ” followed by “ $4 - 3 = 5x$ ”. Some candidates used trial and improvement to solve the equation without any reference to algebraic techniques.

- In part (a) many candidates were unable to combine like terms. They introduced indices where there weren't any, or made errors with minus signs. Most candidates answered part (b) correctly, though $2p^2q$ and $2p^2q^2$ were common incorrect answers.
- Only 52% of candidates obtained the correct answer. Many candidates thought that candidates obtained the correct answer. Many candidates thought that $y + y = y^2$.
 - Only 20% of candidates could simplify this expression. The most common wrong answers were p^6 or $3p^6$
- In part (a) many candidates were able to simplify $e + f + e + f + e$ correctly but some confused $3e$ with e^3 and gave the answer as $e^3 + f^2$. It was disappointing that only a quarter of the candidates could simplify $p^2 + p^2 + p^2$ correctly in (ii). The most common error was for the powers to be added, leading to either p^6 or $3p^6$. It was pleasing to see the majority of candidates showing their working in part (b) and many gained a method mark for $5 \times -3 + 1$ but, unfortunately, this was sometimes evaluated incorrectly. Common errors were $5 \times -3 = 15$ and $5 \times -3 + 1 = -16$. Some candidates were unable to interpret $5x + 1$ correctly and wrote $5 - 3 + 1 = 3$.

6. Specification A**Foundation Tier**

The modal mark on this question was 1 with 71% of candidates gaining this mark. Only 9% were able to obtain both marks.

Intermediate Tier

Most candidates were able to gain at least one mark. $2y + 2y$ was the correct expression most commonly identified. The most popular wrong answers were $2 + 2y$ and $2y \times 2y$.

Specification B

Many candidates were able to find an expression equivalent to $4y$ and gain at least one mark.

7. Most candidates gained full marks in part (a). Some spoiled their answer by incorrectly simplifying further, to $7ab$. In part (b) most candidates gave the wrong answer, by changing the power of the x .
8. In over 75% of the responses part (i) was correct. There were a few careless errors where candidates added and achieved $7g$. In a few cases students read the 'g' to mean grams and answered accordingly. Part (ii) caused more problems with only a quarter of the candidates being successful in writing p^2 , with the most common incorrect response being $2p$.
9. For an algebraic manipulation question on the foundation tier, this was well answered. 65% of candidates were able to write $c + c + c$ as $3c$ and 76% of candidates added $2a$ and $3a$ correctly. There was less success when different letters were used e.g. e and f and xy often caused confusion with about 50% and 37% respectively obtaining the correct answer. In part (e), with letters and numbers to confuse them, only 22% of candidates were completely successful. A common error was to combine all the terms to get $17ab$.
10. Part (a) was well answered. In part (b) the frequent error was not to simplify the expression fully.

11. Even basic algebra was a weakness on this paper. Only about half the candidates were able to simply the expression in parts (a) and (b), with the performance far worse in parts (c) and (d). In part (a) candidates were just guessing, giving answers such as m^4 and 4^m , and in (b) pq^4 and incomplete expressions such as $pq \times 4$ or similar.

In (c) many did not know what to do with the 5. Many added it, others doing a partial expansion leading to $15x$, $15x - 2$ or $15x + 5 - 2$

In part (d) few gave any reasonable answer, with a plethora of terms associated with 3, y and 4, but with little recognition of what was needed when multiplying. In some cases correct answers were spoilt by incorrect and unnecessary further simplification, such as $15y^2$.

12. Most candidates scored no more than one mark on this question. It was clear that some centres had done little to no work on algebra or the candidates just could not cope with this topic.
(a) Most did not simplify fully, with $6x \times y$ and $2x \times 3y$ as the most common incorrect answers.
(b) A few candidates managed to score one mark by obtaining $3x$ or $4y$ and then missing out the + sign or by giving the answer $7x + 4y$.
(c) Hardly any candidates scored here with $50x$ being a very popular answer for those who tried to attempt it.
13. Algebra has generally caused problems for Foundation candidates and this paper was no exception. Most candidates realised that 4 was part of the answer to (i) and (ii) but failed to write the answer in its correct form. $7pr$ was a common incorrect answer to (iii).
14. Most candidates were able to collect like terms and gained full marks for an answer of $8g$ in part (i); the usual error was an answer of $8g^2$. (ii) was generally well done however a significant number of answers of $7rp$ were seen and a few candidates failed to get rid of the multiplication sign.
15. Algebra continues to be the Achilles heel for Foundation candidates with virtually all candidates scoring low marks on this question. Partially simplified answers were common in (a). $5e$ was frequently seen as the answer to (i) and a multiplication sign was often in the answer to (ii) scoring no marks.
There were very muddled responses to multiplying out $7(2x - 1)$. The few that realised that they had to multiply by 5 tended to multiply only the first term in the bracket by 7 reaching an answer of $14x - 1$.

16. (a) It was pleasing to see that over $\frac{3}{4}$ of the candidates were able to correctly simplify an algebraic expression. The most common incorrect response was $12m^2$.
(b) This proved very challenging to even the most able students at this level with only 8% of the candidates scoring the available mark.
17. In part (a) adding together $x + x + x$ produced many correct results (72% of candidates) although a significant number succeeded in reaching 3 but omitted the letter x in their answer. Part (b) was less successful (32% of candidates scoring the mark) with $2e \times 3f$ appearing as $5ef$ in the majority of incorrect responses.
18. (a) Candidates at this level have very little understanding of even the most straightforward question involving fractions and this was borne out by the multitude of incorrect methods in a desperate attempt to work out $60 \times \frac{2}{3}$ with $\frac{120}{180}$ or even 300 being the most popular incorrect answers. Only 3% of the candidates were able to reach the correct answer of 40.
(b) There was a very muddled response here, which showed a clear lack of understanding of substitution involving squaring by the vast majority of candidates. The key to working out the correct answer was to realise that $t^2 = 3 \times 3 = 9$. Most wanted to multiply 5 by 3 first before squaring whilst 3% of the candidates who did reach 9 then went on to write $59 - 7 = 48$ or some other grossly incorrect calculation.
19. Simplifying the algebraic expressions in parts (a) and (b) gave rise to a range of answers. For $d + d + d$ it was not unusual to see d^3 rather than $3d$ whilst $2c + 4c + c$ produced unconvincing simplifications like $6c + c$, $2c + 5c$ or just $6c$. Part of the problem seemed to be in the understanding of c in the expression and this may be overcome by thinking of it as $1c$. Solving the equation $x + 7 = -3$ led to $x = -10$ with many correct values seen. Other values included 10 where the signs were ignored and 4 from $x = 7 - 3$. The final part involved solving $5y + 3 = 15$ and, because y had the value of 2.4 rather than a whole number, it proved to be difficult for the majority of candidates with only 10% scoring both marks.
20. Most candidates had some success with the first two parts and simplifying $4a \times 3b$. However, multiplying out $3(t - 4)$ proved impossible for over 90% of the candidates. Most of these had no idea and rarely ended up with two terms.

21. The first algebraic question which required the simplification of ' $pq + pq + pq$ ' gave rise to only around 33% of candidates providing a correct form of ' $3pq$ '. There were many instances of the simplification leading to ' $3p + 3q$ ' and also ' pq^3 '. Some numerical ideas also crept in with ' $3 + 3 + 3$ ' appearing the most.
22. Simplifying ' $q + q + q$ ' produced the correct outcome of ' $3q$ ' in over 70% of the responses but ' q^3 ' was seen every so often. In part (b) simplifying the algebraic expression often lead to ' $11r$ ' being correctly stated but there was less confidence in dealing with ' $5t - 2t$ '. Nearly 70% of the candidates were able to score at least one mark by writing either ' $11r$ ' or ' $3t$ ' and half of these then went on to write both terms correctly. One of the difficulties experienced by candidates in this type of question is to know when the simplification has to be called to a halt. Having arrived at the correct end result of ' $11r + 3t$ ' it was not unusual to see this mistakenly taken to ' $14rt$ ' by combining the two terms together.
23. Part (a) of this question was answered correctly by about 4 out of every 5 candidates. However, easily the most popular response to part (b) was $2p$ rather than the correct answer p^2 . A significant number of candidates left their answer in the form pp . This was insufficient for the award of the mark available for this part of the question. A few candidates still give purely numerical answers to this type of question although this is fewer than seen in the past.
24. Over 70% of the candidates were able to successfully add $c + c + c$. However, once two letters were involved, the success rate dropped to only around 50%. It was not uncommon to see answers of c^3 and $e^2 + f^3$ as candidates struggled to distinguish between coefficients and indices.
25. Candidates at this tier of entry often struggle with manipulative algebra and this was true again with these questions. In part (a) 45% of candidates obtained the correct answer whilst in part (b) only 30% of candidates could expand the bracket correctly and in part (c) only 15% obtained the fully simplified answer with a further 35% gaining 1 mark for $7r$ or $-9t$.
26. 71% of the candidates were able to simplify $a + a + a + a$ to $4a$, whilst simplifying $2 \times p \times q$ to $2pq$ was not quite as successful, with only half the candidates getting this part correct. In part (c) most candidates were able to score at least one mark for writing $4a$ or $2b$, (not $-2b$), but then struggled to write down the complete answer. It was not uncommon to see an answer of $4a 2b$ or $6ab$.

27. (a) This was correctly answered by many candidates, g^3 being the most common error.
(b) Again the majority of candidates gained the mark here. $5 \times hk$ was a common error.
28. This question was not answered well; a great number of candidates demonstrating no knowledge of the expansion of two brackets. $x + 5$ and $x + 2$ was often simplified to $5x$ and $2x$ resulting in an answer of $7x$. Of those candidates who did use correct methods of expansion $x^2 + 7x + 7$ was a common error.
29. d^5 was the usually incorrect answer here, although most candidates scored full marks.
30. 75% of the candidates were successful in part (a) with $h3$ being the most common incorrect response.
In part (b) 75% wrote the correct answer. Some added the two terms whilst other wrote 5 on its own or $5k^2$.
Part(c) proved to be the most challenging with $5mp$ being the most common answer. Only 46% wrote the correct answer. Another very popular incorrect response was $2m3p$.
31. Algebra is not well understood by many foundation candidates and this question proved to be no exception. The most common answer for part (a) was 2 rather than k whilst instead of $12y$ in (b) candidates added the coefficients rather than multiplied them. In part (c) candidates were more successful with many candidates writing $3a + 2b$ unfortunately some then oversimplified their answer to $5ab$.
32. This question on basic algebraic manipulation was again well understood with a 79% success rate. However many candidates wrote x^5 or 5^x rather than the correct answer of $5x$

33. Most candidates (74%) were able to simplify " $m + m + m$ " to give " $3m$ " or " $m3$ " both of which were accepted in part (a). However, a significant minority of candidates gave the incorrect response " m^3 ".

In part (b), 40% of candidates gave the correct answer " y^2 ". Perhaps not surprisingly, " $2y$ " was the main incorrect response seen.

Part (c) of the question was poorly done. Examiners could award full marks to only just over one in ten candidates. A further one in three of candidates could give one correct term, either " $5a$ " or " b ". Incorrect responses usually included one or more of the terms " a " and " $-9b$ ". " $1b$ " and " $b1$ " were accepted as alternatives to " b ".