

**Q1.** Simplify

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

.....

**(Total 1 mark)**

**Q2.** (a) Simplify  $2k - k$

.....

**(1)**

(b) Simplify  $3 \times 4y$

.....

**(1)**

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

.....

**(2)**  
**(Total 4 marks)**

**Q3.** (a) Simplify  $m + m + m$ .

.....

(1)

(b) Simplify  $y \times y$ .

.....

(1)

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

.....

(2)

(Total 4 marks)

**Q4.** (a) Simplify  $c + c + c$ 

.....

(1)

(b) Simplify  $4x + 5y - 2x + y$

.....

(2)  
(Total 3 marks)

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(a) Simplify  $y + y + y + y + y$

.....

(1)

(b) Simplify  $x + 5 + 2x - 7$

.....

(2)  
(Total 3 marks)

**Q6.** (a) Solve  $3X = 12$

$x =$  .....

(1)

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

.....

(1)  
(Total 2 marks)

**Q7.** (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)

**Q8.** (a) Simplify  $7x + 3x - 4x$

.....

**(1)**

(b) Solve  $3y - 2 \geq -8$

.....

**(2)**

**(Total 3 marks)**

M1.

Answer	Mark	Additional Guidance
$5x$	1	<b>B1</b> Accept $x5$ or $5 \times x$ or $x \times 5$ or $5.x$
<b>Total for Question: 1 mark</b>		

M2.

	Working	Answer	Mark	Additional Guidance
(a)		$k$	1	<b>B1</b> for $k$
(b)		$12y$	1	<b>B1</b> for $12y$
(c)	$(a + a + a) + (b + b)$	$3a + 2b$	2	<b>B2</b> for $3a + 2b$ ( <b>B1</b> for $3a + kb$ or for $ka + 2b$ )
<b>Total for Question: 4 marks</b>				

M3.

	Answer	Mark	Additional Guidance
(a)	$3m$	1	<b>B1</b> for $3m$ (accept $m3$ )

(b)	$y^2$	1	<b>B1</b> for $y^2$ cao
(c)	$5a + b$	2	<b>B2</b> for $5a + b$ cao ( <b>B1</b> for $5a$ or $b$ or $1b$ )
<b>Total for Question: 4 marks</b>			

**M4.**

	Answer	Mark	Additional Guidance
(a)	$3c$	1	<b>B1</b> cao
(b)	$2x + 6y$	2	<b>B2</b> for $2x + 6y$ ( <b>B1</b> for $2x$ or $6y$ )
<b>Total for Question: 3 marks</b>			

**M5.**

	Working	Answer	Mark	Additional Guidance
(a)		$5y$	1	<b>B1</b> for $5y$ or $5 \times y$
(b)	$x + 2x + 5 - 7$	$3x - 2$	2	<b>B2</b> cao [ <b>B1</b> for either $3x$ or $-2$ ]
<b>Total for Question: 3 marks</b>				

M6.

	Answer	Mark	Additional Guidance
(a)	4	1	$\frac{12}{3}$ <b>B1</b> cao Accept
(b)	$4pq$	1	<b>B1</b> cao
<b>Total for Question: 2 marks</b>			

M7.

	Working	Answer	Mark	Additional Guidance
(a)		$4m$	1	<b>B1</b> for $4m$ oe
(b)		$4pq$	1	<b>B1</b> for $4pq$ or $4qp$ or $p4q$ oe
(c)	$5 \times 3x - 5 \times 2$	$15x - 10$	1	<b>B1</b> for $15x - 10$ cao
(d)	$3y \times y + 3y \times 4$	$3y^2 + 12y$	2	<b>M1</b> 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 <b>A1</b> for $3y^2 + 12y$ or $3 \times y^2 + 12 \times y$
<b>Total for Question: 5 marks</b>				



M8.

	Working	Answer	Mark	Additional Guidance
(a)		$6x$	1	<b>B1</b> cao
(b)		$y \geq -2$	2	<b>M1</b> attempt to isolate $y$ <b>A1</b> cao
				<b>Total for Question: 3 marks</b>

**E1.** 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  $5x$

**E2.** 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  $5ab$ .

**E3.** Most candidates (74%) were able to simplify " $m + m + m$ " to give " $3m$ " or " $m^3$ " both of which were accepted in part (a). However, a significant minority of candidates gave the incorrect response " $m$ ".

In part (b), 40% of candidates gave the correct answer " $y$ ". 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 " $b$ " were accepted as alternatives to " $b$ ".

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A common incorrect answer in part (a) was  $c^3$ . In part (b) most scored one mark, but there were too many errors of sign. A common answer was  $6x-6y$ .

Too often a correct answer was spoilt by over-simplification,  $8xy$  being the best example of this.

**E6.** Part (a) was well answered. In part (b) the frequent error was not to simplify the expression fully.

**E7.** 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  $15y^2$ .