Mynegiad, Hafaliad, Fformiwla, Unfathiant

1.

(a) Symleiddiwch $11x + 6y + 14x - 9y$. [2]

.....

.....

(b) Darganfyddwch werth $5a + 3b$ pan fo $a = -3$ a $b = 6$. [2]

.....

.....

(c) Ehangwch $p(2 + 5p)$. [2]

.....

(ch) Ffactoriwch $3xy - 9y$. [2]

.....

(d) **hafaliad** **anhafaledd** **fformiwla** **mynegiad**

Defnyddiwch un o'r enwau arbennig uchod i ddisgrifio'r canlynol: [2]

(i) $5x + 3y$ .....

(ii) $8p + 9 = 25$ .....

(dd) Pa un sydd â'r gwerth mwyaf, $3x^2$ neu $(3x)^2$, pan fo $x = 2$?
Rhaid i chi ddangos eich gwaith cyfrifo. [1]

.....

.....

.....

2.

(a) Symleiddiwch $5p + 3q + 10r - 8q$. [2]

.....

(b) Ehangwch $x(x^2 + 7)$. [2]

.....

(c) Ffactoriwch $3x^2 + 27x$. [2]

.....

(ch) **hafaliad** **anhafaledd** **fformiwla** **mynegiad**

Defnyddiwch un o'r enwau arbennig uchod i ddisgrifio'r canlynol [2]

(i) $10x + 5$ .....

(ii) $9y + 1 = 19$. .....

(d) Defnyddiwch y cliwiau canlynol i ddarganfod y rhif coll.

- Mae'r rhif rhwng 300 a 400.
- Mae'n lluosrif 30 a 45. [3]

.....

.....

.....

.....

Y Rhif Coll yw .....

Haen Uwch yn unig

3. Dangoswch fod $(2x + 7)(x - 4) + x(x + 1) + 4 \equiv 3(x^2 - 8)$.

[3]

4. Dangoswch fod $(4x - 1)(6x + 5) - (8x - 1)(3x + 5)$ yn unfath â *(identical to)* $-23x$.

[4]

5. *(a)* Dangoswch fod yr unfathiant canlynol yn gywir. [4]

$$(x + 2)(2x - 5) + (1 - x)(3 + 2x) + 1 \equiv -2(x + 3)$$

Cynllun Marcio

1.

11 (a) 25x-3y	B2	Must be in an expression, B1 for either $25x$ or $-3y$ Award B1 for $25x + -3y$
(b) $5\times-3 + 3 \times 6$ (= -15+18) 3	M1 A1	If use 3 not -3 award M0 CAO
(c) $2p + 5p^2$	B2	Must be in an expression, B1 for either $2p$ or $5p^2$
(d) 3y(x-3)	B2	B1 for correct partial factorisation eg $3(xy - 3y)$ or $y(3x - 9)$, or 3y(… - 3) or 3y(x - ….)……
(e) Expression Equation	B1 B1	
(f) Conclusion (stated or implied) that $(3x)^2$ is greater with either sight of $3x^2 = 12$ AND $(3x)^2 = 36$ OR statement that $(3x)^2$ is 3 times the value of $3x^2$ OR Sight of $(3x)^2 = 9x^2$ is sufficient	B1	Allow sight of $3x^2 = 12$ AND $(3x)^2 = 36$ as implied conclusion
	11	

2.

Methods in Mathematics June 2015 Unit 1 Foundation Tier	Mark	Comments
10. (a) $5p - 5q + 10r$	B2	Must be in an expression, B1 for sight of $-5q$
(b) $x^3 + 7x$	B2	B1 for sight of either x^3 or 7x. Mark final answer. Do not accept $x\times x^2$ for x^3
(c) $3x(x + 9)$	B2	B1 for either 3x(x + …) or 3x(… + 9) or correct partially factorised expression
(d) (i) Expression (ii) Equation	B1 B1	
(e) 360	B3	B2 for listing multiples of 30 and multiples of 45 including one of each between 300 and 400 B1 for recognising that the missing number is a multiple of 90 or listing multiples of 30 **or** 45. Attempt to list at least three multiples of 30 **or** 45.
	11	

3.

13. $2x^2 + 7x - 8x - 28 + x^2 + x + 4$ OR $2x^2 - x - 28 + x^2 + x + 4$ $3x^2 - 24 = 3(x^2 - 8)$, i.e.both steps shown	M2 A1 3	M1 if 1 slip or error CAO

4.

12. $24x^2 - 6x + 20x - 5$ AND $24x^2 - 3x + 40x - 5$ OR $-24x^2 + 3x - 40x + 5$	B3	B2 for either expansion of pair of brackets correct B1 for one slip in both expansions
Clearly reducing to $-6x + 20x + 3x - 40x$ to $-23x$	B1	CAO. Convincing from correct working

5.

(a) $2x^2 + 4x - 5x - 10 + 3 - 3x + 2x - 2x^2 (+ 1)$ or $2x^2 - x - 10 + 3 - x - 2x^2 (+ 1)$	M2	M1 for any 4 terms correct
$-2x - 6 =$	A1	
$-2(x + 3)$	A1	Must be convincing from sight of $-2x - 6$ Allow expanding RHS provided M2, A1 previously awarded