

(Page 1: Outcome C-1)

1) For each polynomial:

x^5	$+ 2x^3y$	$+ 3xy^3$	$+ y^4$	$+ 2$
5	4	4	4	0

a) State the degree of each term
 (in the order they appear above - **including any constants**)

b) State the number of terms 5

c) State the coefficients of each term (in the order they appear above- **including any constants**).

1	2	3	1	none - no variables
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d) State the degree of the ~~expression~~ degree 5
 polynomial 0

/ 6 marks (0.5 x 12) C1

2) Create an expression **that does not qualify as a polynomial** and say why it does not:

Exponents must be a (pos) int or 0 (2 marks C1)

NO sq. root of a variable & NO var. in a denominator

3) Write the following sum of polynomials **as one expression in standard form** (ie. Descending order)

$(7s + 14) + (-6s^2 + 1s - 6) = -6s^2 + 8s + 8$ (3 marks C1)

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4) Simplify the following polynomials by collecting like terms: *They need not be in standard form.*

$$-12b + 6b - 4b$$

$$\underline{-10b}$$

/1 mark C2

$$\begin{array}{l} (8x^3y^2) - 7x^2y + 8x + 4(-6x^3y^2 + 2x^2y + 4x^2y - 3x) + 5 \\ \hline 2x^3y^2 - x^2y + 5x + 9 \end{array}$$

/4 marks C2

5) Add the following polynomials by collecting like terms.

Express each answer below in standard form

$$(3x^2 + 2xy + 4y^2) + (6x^2 - 5xy + 3y^2) + (9x^2 - 25y^2)$$

$$\underline{18x^2 - 3xy - 18y^2}$$

/4 marks C2

$$(4a^3 + 7a^2b + 6b^3) + (a^3 + 2a^2b + 4b^3)$$

$$\underline{5a^3 + 9a^2b + 10b^3}$$

/4 marks C2

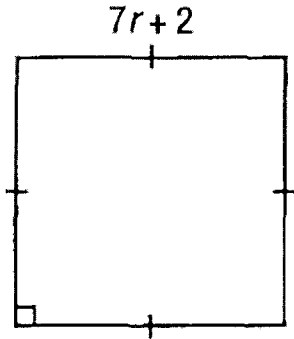
$$(12ab^2 - 7a^2b) + (3ab + 4a^2b + 6ab^2)$$

$$\underline{-3a^2b + 18ab^2 + 3ab}$$

/4 marks C2

6) Write an addition statement for the second shape (using brackets and a plus sign to separate each expression), followed by the perimeter of each shape as a simplified expression:

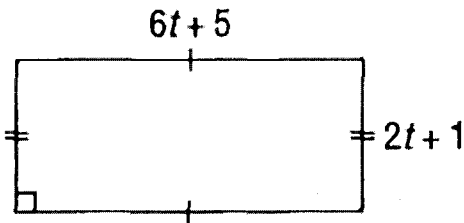
6a)



Example: The addition statement looks like: $(7r+2) + (7r+2) + (7r+2) + (7r+2)$

The simplified perimeter equals: $28r + 8$ / 1 mark C2

6b)



The addition statement looks like: $(6t+5) + (2t+1) + (6t+5) + (2t+1)$ / 1 mark C2

The simplified perimeter equals: $16t + 12$ / 1 mark C2

7) Write ~~an expression~~ ^{1 simplified polynomial} for the perimeter of a rectangle with a length that is 8 cm longer than twice its width.

Draw and label a diagram before writing the answer.

/ 3 marks C2

