Alg 2A Tuesday, May 9, 2019 Bellwork

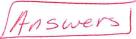
Expand each. Simplify terms and write answer in Standard Form when there is only one variable. 1. $(x+3)^6$

2.
$$(2P - Q)^8$$

3.
$$(4R - 5T)^5$$

4. Find the 4th term of the polynomial created by expanding $(3a-2b)^9$

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Expand each. Simplify terms and write answer in Standard Form when there is only one variable.

1.
$$(x+3)^6$$
 = $\frac{x^6}{18x^5 + 135x^4 + 540x^3 + 1215x^2 + 1458x + 729}$

2.
$$(2P-Q)^8$$
 = $(2p)^8$ - $8(2p)^7Q$ + $28(2p)^6Q^2$ - $56(2p)^5Q^3$ + $70(2p)^4Q^4$ - $56(2p)^3Q^5$ + $28(2p)^2Q^5$ - $8(2p)^2Q^7$ + Q^8
= $(2p)^8$ - $1024p^7Q$ + $1792p^6Q^2$ - $1792p^5Q^3$ + $1120p^4Q^4$ - $448p^3Q^5$ + $112p^2Q^6$ - $16pQ^7$ + Q^8

3.
$$(4R-5T)^5 = \frac{(4R)^5}{-5(4R)^4/5T} + \frac{10(4R)^3/5T^2 - 10(4R)^2/5T^3}{+5(4R)(5T)^4 - (5T)^5} = \frac{5(4R)^4/5T}{+12500RT^4 - 3125T^5}$$

4. Find the 4th term of the polynomial created by expanding $(3a-2b)^9$

$$-84(3a)^{6}(2b)^{3} = -489,888a^{6}b^{3}$$