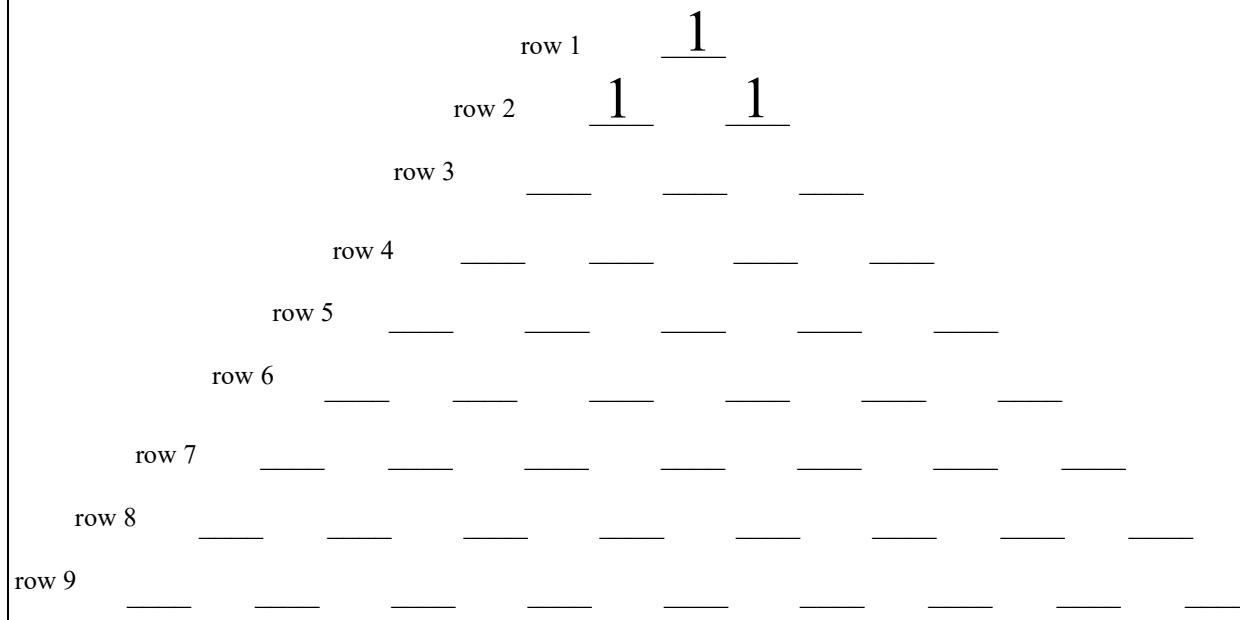


CH.12: EXPANDING BINOMIALS USING PASCAL'S TRIANGLE

NAME:

PER:

1. Write the first nine rows of Pascal's Triangle:



NOTE: to find $(a + b)^n \rightarrow$ use row _____

2. $(a + b)^2 =$

3. $(x + y)^6 =$

4. $(a - b)^4 =$

CHECK ANSWERS:

$56x^5y^3$	$2940x^2y^4$	$-340,200\sqrt{5}x^3$	$a^4 - 4a^3b + 6a^2b^2 - 4ab^3 + b^4$
$x^6 + 6x^5y + 15x^4y^2 + 20x^3y^3 + 15x^2y^4 + 6xy^5 + y^6$		$6400\sqrt{5}x^3$	
$a^{10} - 20a^8b + 160a^6b^2 - 640a^4b^3 + 1280a^2b^4 - 1024b^5$		$-1344xy^6$	
$a^4b^4 - 12a^3b^3c + 54a^2b^2c^2 - 108abc^3 + 81c^4$		$a^2 + 2ab + b^2$	

For #5-7, use Pascal's Triangle to expand each binomial. Clearly show all work on the back or on a separate sheet of paper. Express final answer in simplified radical form...no decimals!

5. $(2a + \sqrt{5})^6$

6. $(a^2 - 4b)^5$

7. $(ab - 3c)^4$

For #8-10, find the designated term of each binomial expansion. Clearly show all work. (Don't expand all terms, just find ONE term using extended patterns.)

8. 4th term of $(x + y)^8$

9. 6th term of $(x - 3\sqrt{5})$

10. 5th term of $(2x + \sqrt{7}y)^6$

11. 7th term of $(-3x + 2y)^7$

12. 4th term of $(-4x - \sqrt{5})^6$