

Name _____

13-6B Lesson Master

Questions on SPUR Objectives
See Student Edition pages 934-937 for objectives.

SKILLS Objective E

Fill in the Blanks In 1 and 2, complete the expansion.

1. $(x + y)^6 =$ _____ $x^6 +$ _____ $x^5y +$ _____ $x^4y^2 +$ _____ $x^3y^3 +$
 _____ $x^2y^4 +$ _____ $xy^5 +$ _____ y^6

2. a. $(2m + 3n^2)^6 = 1(2m)^6(3n^2)^0 +$ _____ $(2m)$ _____ $(3n^2)$ _____ $+$
 _____ $($ _____ $)$ _____ $($ _____ $)$ _____ $+$ _____ $($ _____ $)$ _____ $($ _____ $)$ _____ $+$
 _____ $($ _____ $)$ _____ $($ _____ $)$ _____ $+$ _____ $($ _____ $)$ _____ $($ _____ $)$ _____ $+$
 _____ $($ _____ $)$ _____ $($ _____ $)$ _____

b. Simplify.
 $(2m + 3n^2)^6 =$ _____

In 3-11, expand the binomial using the Binomial Theorem.

3. $(x^4 + 5)^3$

4. $(5p^2 - q)^3$

5. $(3a - 7b)^4$

6. $(m - n^4)^5$

7. $(5p^2 - q)^6$

8. $(a^4 - 1)^8$

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9. $(m^3 - n^7)^4$

10. $(p - 0.5)^6$

11. $(2r + 4s)^7$

12. What is the fourth term in the expansion of $(2x - y)^7$?

13. What is the third term in the expansion of $(x^3 - 2)^4$?

14. What is the x^6 term in the expansion of $(x - 4)^7$?

15. What is the x^3 term in the expansion of $(x + 3)^{10}$?

PROPERTIES Objective F

16. a. Write rows 0 through 6 of Pascal's Triangle.

b. Expand $(a + b)^n$ for $n = 0, 1, 2, 3, 4, 5, 6$

17. **Fill in the Blanks** In the expansion of $(a + b)^{13}$, $\binom{13}{4}$ is the coefficient of the term with a to the _____ power and b to the _____ power.

18. Write the coefficient of the x^7y^5 term in the expansion of $(x + y)^{12}$. _____