

Math 3 Advanced

6.3 Practice Part 1 with KEY

Perform a binomial expansion.

1. Expand:  $(a + b)^4$

2. Expand:  $(x - y)^3$

3. Expand:  $(c - d)^5$

4. Expand:  $(a + b)^6$

5. Expand and simplify:  $(6 - k)^4$

6. Expand and simplify:  $(7 + d)^4$

7. Expand and simplify:  $(5m + n)^4$

8. Expand and simplify:  $(2b - 7c)^3$

**Answer List**

1.  $a^4 + 4a^3b + 6a^2b^2 + 4ab^3 + b^4$

3.  $c^5 - 5c^4d + 10c^3d^2 - 10c^2d^3 + 5cd^4 - d^5$

5.  $1296 - 864k + 216k^2 - 24k^3 + k^4$

7.  $625m^4 + 500m^3n + 150m^2n^2 + 20mn^3 + n^4$

2.  $x^3 - 3x^2y + 3xy^2 - y^3$

4.  $a^6 + 6a^5b + 15a^4b^2 + 20a^3b^3 + 15a^2b^4 + 6ab^5 + b^6$

6.  $2401 + 1372d + 294d^2 + 28d^3 + d^4$

8.  $8b^3 - 84b^2c + 294bc^2 - 343c^3$