

Special Products – Sum of Cubes 1

Name \_\_\_\_\_

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

**Factor.**

1)  $d^3 + 216$  1) \_\_\_\_\_  
A)  $(d + 6)(d^2 + 36)$  B)  $(d + 6)(d^2 - 6d - 36)$   
C)  $(d + 6)(d^2 - 6d + 36)$  D)  $(d + 6)(d^2 + 6d + 36)$

2)  $t^3 + 27$  2) \_\_\_\_\_  
A)  $(t + 3)(t^2 + 9)$  B)  $(t + 3)(t^2 - 3t + 9)$   
C)  $(t - 27)(t^2 - 1)$  D)  $(t - 3)(t^2 + 3t + 9)$

3)  $64p^3 + 1$  3) \_\_\_\_\_  
A)  $(4p + 1)(16p^2 + 1)$  B)  $(64p + 1)(p^2 - 4p + 1)$   
C)  $(4p + 1)(16p^2 - 4p + 1)$  D)  $(4p - 1)(16p^2 + 4p + 1)$

4)  $125k^3 + m^3$  4) \_\_\_\_\_  
A)  $(5k + m)(25k^2 - 5km + m^2)$  B)  $(5k + m)(25k^2 + m^2)$   
C)  $(5k + m)(25k^2 - 5km - m^2)$  D)  $(5k + m)(25k^2 + 5km + m^2)$

5)  $125s^3 + 8t^3$  5) \_\_\_\_\_  
A)  $(5s + 2t)(25s^2 - 10st + 4t^2)$  B)  $(6s + 2t)(25s^2 + 4t^2)$   
C)  $(5s + 2t)(25s^2 + 10st + 4t^2)$  D)  $(5s - 2t)(25s^2 - 10st + 4t^2)$

6)  $729c^3 + 343$  6) \_\_\_\_\_  
A)  $(9c + 7)(81c^2 + 49)$  B)  $(9c - 7)(81c^2 + 63c + 49)$   
C)  $(9c + 7)(81c^2 - 63c + 49)$  D)  $(729c + 7)(c^2 - 63c + 49)$

7)  $125x^6 + 216y^9$  7) \_\_\_\_\_  
A)  $(5x^2 - 6y^3)(5x^2 + 6y^3)$  B)  $(5x^2 - 6y^3)(25x^2 + 30x^2y^3 + 36y^6b^2)$   
C)  $(5x^2 + 6y^3)(25x^4 - 30x^2y^3 + 36y^6)$  D)  $(5x^2 + 6y^3)(25x^4 + 30x^2y^3 + 36y^6)$

## Answer Key

Testname: 6.18.28 SOLVINGQUADRATICSI

- 1) C
- 2) B
- 3) C
- 4) A
- 5) A
- 6) C
- 7) C