

Practice for special factoring.

Factor the following, completely.

1. $z^2 - 81$
2. $a^2 - 1$
3. $g^2 + 144$
4. $9x^2 - 49$
5. $36b^2 - 9$
6. $16 - d^2$
7. $x^3 - 64$
8. $m^3 + 216$
9. $1 - b^3$
10. $8p^3 + 729$
11. $4b^3 + 27$
12. $9c^3 - 72$

(11) $4b^3 + 27$
NOT factorable

(12) $9c^3 - 72$
 $9(c^3 - 8)$
 $9[(c)^3 - (2)^3]$
 $9(c-2)(c^2 + 2c + 4)$

(1) $z^2 - 81$
 $(z-9)(z+9)$

(2) $a^2 - 1$
 $(a-1)(a+1)$

(3) $g^2 + 144$
 NOT factorable

(4) $9x^2 - 49$
 $(3x-7)(3x+7)$

(5) $36b^2 - 9$
 $9(4b^2 - 1)$
 $9(2b-1)(2b+1)$

(6) $16 - d^2$
 $(4-d)(4+d)$

(7) $x^3 - 64$
 $(x)^3 - (4)^3$
 $(x-4)(x^2 + 4x + 16)$

(8) $m^3 + 216$
 $(m)^3 + (6)^3$
 $(m+6)(m^2 - 6m + 36)$

(9) $1 - b^3$
 $(1)^3 - (b)^3$
 $(1-b)(1+b+b^2)$

(10) $8p^3 + 729$
 $(2p)^3 + (9)^3$
 $(2p+9)(4p^2 - 18p + 81)$