

## FACTORIZING SQUARES AND CUBES

WS3

Factor Completely.

1.  $x^2 - 16$

2.  $x^2 - 64$

3.  $9x^2 - 1$

4.  $16x^2 - 25$

5.  $36x^2 - 1$

6.  $x^8 - 100$

7.  $1 - 49b^2$

8.  $81x^2 - 4$

9.  $b^2 - 121c^2$

10.  $25x^2 - 144$

11.  $x^2 + 25$

12.  $x^2 - 400$

13.  $x^4 - y^8$

14.  $x^6 - 25$

15.  $y^8 - 81$

16.  $y^3 + 1$

17.  $x^3 - 1$

18.  $x^3 - y^3$

19.  $8a^3 + 1$

20.  $27x^3 - 125$

21.  $64p^3 + 27$

22.  $27a^3 - 64b^3$

23.  $w^3 - 216$

24.  $m^9 - 8$

25.  $27a^9 - 125b^6$

26.  $1000x^3 + 27y^3$

27.  $x^3 + y^8$

ANSWERS ON BACK

## Factor Completely.

1.  $x^2 - 16$

$$(x+4)(x-4)$$

2.  $x^2 - 64$

$$(x+8)(x-8)$$

3.  $9x^2 - 1$

$$(3x+1)(3x-1)$$

4.  $16x^2 - 25$

$$(4x+5)(4x-5)$$

5.  $36x^2 - 1$

$$(6x+1)(6x-1)$$

6.  $x^8 - 100$

$$(x^4+10)(x^4-10)$$

7.  $1 - 49b^2$

$$(1+7b)(1-7b)$$

8.  $81x^2 - 4$

$$(9x+2)(9x-2)$$

9.  $b^2 - 121c^2$

$$(b+11c)(b-11c)$$

10.  $25x^2 - 144$

$$(5x+12)(5x-12)$$

11.  $x^2 + 25$

NF

12.  $x^2 - 400$

$$(x+20)(x-20)$$

13.  $x^4 - y^8$

$$(x^2+y^4)(x^2-y^4)$$
  
$$(x^2+y^4)(x+y^2)(x-y^2)$$

14.  $x^6 - 25$

$$(x^3+5)(x^3-5)$$

15.  $y^8 - 81$

$$(y^4+9)(y^4-9)$$
  
$$(y^4+9)(y^2+3)(y^2-3)$$

16.  $y^3 + 1$

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

17.  $x^3 - 1$

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

18.  $x^3 - y^3$

$$(x-y)(x^2+xy+y^2)$$

19.  $8a^3 + 1$

$$(2a+1)(4a^2-2a+1)$$

20.  $27x^3 - 125$

$$(3x-5)(9x^2+15x+25)$$

21.  $64p^3 + 27$

$$4p+3$$

$$(4p+3)(16p^2-12p+9)$$

22.  $27a^3 - 64b^3$

$$(3a)^3 - (4b)^3$$

$$(3a-4b)(9a^2+12ab+16b^2)$$

23.  $w^3 - 216$

$$(w-6)(w^2+6w+36)$$

24.  $m^9 - 8$

$$(m^3-2)(m^6+2m^3+4)$$

25.  $27a^9 - 125b^6$

$$(3a^3)^3 - (5b^2)^3$$

$$(3a^3-5b^2)(9a^6+15a^3b^2+25b^4)$$

26.  $1000x^3 + 27y^3$

$$(10x+3y)(100x^2-30xy+9y^2)$$

27.  $x^3 + y^8$

NF