

## Unit 3 Factoring Review

**Factor each completely.**

1)  $14x^3 + 14x^2 - 35x - 35$

2)  $21b^3 - 35b^2 + 15b - 25$

3)  $15b^3 - 25b^2 - 3b + 5$

4)  $14a^3 + 35a^2 - 10a - 25$

5)  $a^3 - 8a^2$

6)  $4x^2 + 16x + 12$

7)  $4a^3 - 256a$

8)  $v^3 + v^2 - 6v$

9)  $2n^3 - 23n^2 + 30n$

10)  $5x^2 - 38x + 21$

11)  $15r^3 + 20r^2 - 20r$

12)  $15p^2 + 115p + 150$

13)  $25x^2 - 9$

14)  $9a^2 - 16$

15)  $x^2 - 9$

16)  $3r^2 - 27$

17)  $32k^2 + 2$

18)  $50a^2 + 2$

19)  $4k^2 + 9$

20)  $16x^2 + 25$

21)  $x^2 - 13$

22)  $4x^2 - 12$

23)  $16x^2 + 63$

24)  $x^2 + 72$

25) A square has an area of  $x^2 + 10x + 25$ .  
Write an expression in terms of  $x$  for the  
possible length and width of the square.

26) The Johnsons are putting a fence in their  
backyard, but are very picky about the  
ratio of the fence dimensions. They want  
to make sure that the area of the lawn is  
always represented by  $x^2 - 4x + 20$ . What  
expressions could represent the  
dimensions of their fence?