

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**Quiz Review: Factoring**

**Factor** out the greatest common factor (GCF).

1.  $6x^3 - 18x^2$   
 $6x^2(x - 3)$

2.  $16x^2 - 8x$   
 $8x(2x - 1)$

3.  $12n^6m^5 + 9n^8n^4$   
 $3n^6m^4(4m + 3n^2)$

**Factor** the following trinomials completely.

4.  $x^2 - 12x + 32$   
 $(x - 8)(x - 4)$

5.  $x^2 - x - 42$   
 $(x - 7)(x + 6)$

*\* Watch out there is a GCF \**

6.  $2x^2 + 18x + 28$   
 $2(x^2 + 9x + 14)$   
 $2(x + 7)(x + 2)$

7.  $2x^2 - x - 3$

~~$(2x^2 + 2x - 3x - 3)$   
 $2x(x+1) - 3(x+1) - 3 + 2$   
 $(2x-3)(x+1)$~~

8.  $3n^2 - 11n - 20$

~~$(3n^2 - 15n + 4n - 20)$   
 $3n(n-5) + 4(n-5) 4 - 15$   
 $(3n+4)(n-5)$~~

9.  $4x^2 - 11x + 6$

~~$(4n^2 - 8n + 3n + 6)$   
 $4n(n-2) - 3(n-2) - 8 - 3$   
 $(4n-3)(n-2)$~~

10.  $5x^2 + 22x + 8$

~~$(5x^2 + 20x + 2x + 8)$   
 $5x(x+4) + 2(x+4)$   
 $(5x+2)(x+4)$~~

11. A.  $9x^2 - 1$

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

B.  $9x^2 - 9$

$(3x-3)(3x-3)$

11. If the area of a rectangle is  $4x^2 + 5x - 6$  and the width is  $x + 2$ , find the length.

~~$-24$   
 $8 - 3$   
 $5$~~

$(4x^2 + 8x - 3x - 6)$   
 $4x(x+2) - 3(x+2)$   
 $(4x-3)(x+2)$