SECONDARY MATH III

FACTORING WITH DISTRIBUTIVE PROPERTY

NAME_____
DATE_____
CLASS_____

Complete. In exercises with two blanks, both blanks represent the same expression.

1. $12x + 9y = 3(\underline{\ ?\ } + 3y)$
2. $4abc + 8abc^2 = \underline{\ ?\ }(1 + 2c)$
3. $(x^2 + 2xy) + (6kx + 12ky) = x(\underline{\ ?\ }) + 6k(\underline{\ ?\ })$
4. $(12a^2 - 20ab) + (9ay - 15by) = 4a(\underline{\ ?\ }) - 3y(\underline{\ ?\ })$

Factor each polynomial.

5. $7b^2 + 42b$
6. $15m^2n - 27mn^2$
7. $10xz^2 + 30z^6$
8. $8s^3 + 24s^2q$
9. $16g + 14gh^2$
10. $36k^5 + 24k^3 - 18k$
11. $6y^3 - 21y^2 - 4y + 14$
12. $3x^3 + x^2 + 6x + 2$
13. $4w^3 + 3wz - 8w^2 - 6z$

14. **Geometry** The area of a rectangle is represented by $10x^3 + 15x^2 + 4x + 6$. Its dimensions are represented by binomials in x that have prime number coefficients. What are the dimensions of the rectangle?

15. **Standardized Test Practice** Factor the polynomial $4wf + 8w$.

A $4(wf + 2)$ B $4w(f + 2)$ C $4w(f + 8)$ D $w(4f + 8)$