

**Math 2 Unit 9 Worksheet 5A**  
**Factoring Polynomials:  $ax^2 + bx + c$**

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Per: \_\_\_\_\_

[1-4] Factor using the Area Model.

1.  $2w^2 + 13w + 15 =$  \_\_\_\_\_

	$2w^2$	
		15

2.  $5a^2 - 22a + 8 =$  \_\_\_\_\_

	$5a^2$	
		8

3.  $5y^2 - 17y + 14 =$  \_\_\_\_\_


4.  $3n^2 - 14n + 15 =$  \_\_\_\_\_


[5-8] a) Factor each expression.  
 b) Check your answer by multiplying.

5. a)  $2x^2 + 3x - 27$       b)

6. a)  $7n^2 + 13n - 24$       b)

7. a)  $7y^2 + 29y - 30$       b)

8. a)  $3p^2 + 16p + 21$       b)

[9-18] Factor each expression.

9.  $2m^2 + m - 21$

10.  $2s^2 + 13s + 6$

11.  $4b^2 - b - 5$

12.  $2n^2 + 3n - 35$

13.  $6x^2 + 19x - 36$

14.  $7n^2 + 13n - 24$

15.  $7n^2 + 29n - 30$

16.  $9b^2 - 65b + 14$

17.  $3p^2 + 16p + 21$

18.  $3v^2 - 28v - 20$

[19-24] Factor completely.

19.  $25x^2 - 35x - 30$

20.  $15n^2 - 117n - 24$

21.  $10p^2 + 26p + 16$

22.  $15k^2 - 80k + 100$

23.  $50x^2 - 8$

24.  $3m^3 - 27m$

[25-27] Review: Simplify.

25.  $(6a^2q)(-4a^2q^4)$

26.  $4xy^2(2x^4)^3$

27.  $\frac{(4a^4q^{-3})^{-2}}{(2a^{-3}q^4)^3}$