

Name _____

12-5B Lesson Master**Questions on SPUR Objectives**

See pages 773–775 for objectives.

SKILLS Objective BIn 1–4, *multiple choice*. Which expression is the factorization of the given trinomial?

1. $6r^2 - 5r - 6$ _____

A $(3r - 2)(2r + 3)$

B $(3r + 2)(2r - 3)$

C $(6r + 2)(r - 3)$

D $(6r - 2)(r + 3)$

2. $7s^2 + 5s - 2$ _____

A $(7s - 2)(s + 1)$

B $(7s + 1)(s - 2)$

C $(7s - 1)(s + 2)$

D $(7s + 2)(s - 1)$

3. $6x^2 + 3x - 3$ _____

A $3(2x - 1)(3x - 1)$

B $3(2x - 1)(x + 1)$

C $3(2x + 1)(x - 1)$

D $(6x + 3)(x - 1)$

4. $-15y^2 + 19y + 10$ _____

A $(-3y + 5)(5y - 2)$

B $(-3y - 5)(5y - 2)$

C $(-5y - 5)(3y - 2)$

D $(-3y + 5)(5y + 2)$

In 5–12, factor the trinomial completely.

5. $6m^2 - 13m - 5$ _____

6. $35w^2 + 58w - 9$ _____

7. $12s^2 - 40s - 7$ _____

8. $12y^2 + 23y - 9$ _____

9. $8x^2 - 12x - 8$ _____

10. $75p^2 - 20p - 4$ _____

11. $330w^2 - 266w + 48$ _____

12. $40x^3 - 26x^2 - 3x$ _____

Name _____

12-5B

page 2

SKILLS Objective B

In 13–16, solve the equation by factoring.

13. $3x^2 + x - 2 = 0$

14. $-8m^2 + 2m + 3 = 0$

15. $10y^2 + 9y - 7 = 0$

16. $40n^2 - 43n - 6 = 0$

PROPERTIES Objective E

In 17 and 18, a quadratic expression is given. Determine whether the expression is factorable over the integers or is prime. If possible, factor the expression.

17. $6x^2 + 7x - 3$

18. $t^2 + t - 1$

In 19 and 20, *multiple choice*. Determine which of the expressions is prime.

19. A $x^2 - 5x + 6$

20. A $6y^2 - 7y - 3$

B $5x^2 + 9x - 2$

B $5y^2 + 2y + 1$

C $2x^2 + 3x + 3$

C $35y^2 + 53y - 18$

D $20x^2 + 7x - 6$

D $24y^2 + 14y - 5$

21. Barb wanted to find the x -intercepts of the parabola with equation $6x^2 + 83x + 40 = 0$. She listed all the possible factorizations of $6x^2 + 83x + 40$. How should she use the factorizations to find the x -intercepts of the parabola?

$(6x + 1)(x + 40)$

$(6x + 4)(x + 10)$

$(3x + 1)(2x + 40)$

$(3x + 4)(2x + 10)$

$(6x + 40)(x + 1)$

$(6x + 10)(x + 4)$

$(3x + 40)(2x + 1)$

$(3x + 10)(2x + 4)$

$(6x + 2)(x + 20)$

$(6x + 5)(x + 8)$

$(3x + 2)(2x + 20)$

$(3x + 5)(2x + 8)$

$(6x + 20)(x + 2)$

$(6x + 8)(x + 5)$

$(3x + 20)(2x + 2)$

$(3x + 8)(2x + 5)$