

BADAA AL MUTAWA SCHOOL

MATHEMATICS — FACTORING POLYNOMIALS-M11L5 – Using the Distributive Property

Student Name: _____	Grade: _____
Date: _____	Subject: Mathematics
Subject Teacher: Abdulkader Amro	Total Questions: 34

Choose the one correct answer for each question.

SECTION A • FACTOR EACH POLYNOMIAL

11. Factor: $fg - 5g + 4f - 20$

A. $(f - 5)(g + 4)$

B. $(f + 5)(g - 4)$

C. $(f - 5)(g - 4)$

D. $(f + 5)(g + 4)$

12. Factor: $a^2 - 4a - 24 + 6a$

A. $(a + 4)(a - 6)$

B. $(a + 6)(a - 4)$

C. $(a - 6)(a - 4)$

D. $(a + 6)(a + 4)$

13. Factor: $hj - 2h + 5j - 10$

A. $(h + 5)(j + 2)$

B. $(h - 5)(j - 2)$

C. $(h + 5)(j - 2)$

D. $(h - 5)(j + 2)$

14. Factor: $xy - 2x - 2 + y$

A. $(x + 1)(y + 2)$

B. $(x - 1)(y + 2)$

C. $(x + 1)(y - 2)$

D. $(x - 1)(y - 2)$

15. Factor: $45pq - 27q - 50p + 30$

A. $(9q + 10)(5p - 3)$

B. $(9q - 10)(5p + 3)$

C. $(9q - 10)(5p - 3)$

D. $(9q + 10)(5p + 3)$

16. Factor: $24ty - 18t + 4y - 3$

A. $(6t + 1)(4y - 3)$

B. $(6t + 1)(4y + 3)$

C. $(6t - 1)(4y + 3)$

D. $(6t - 1)(4y - 3)$

17. Factor: $3dt - 21d + 35 - 5t$

A. $(3d - 5)(t + 7)$

B. $(3d + 5)(t + 7)$

C. $(3d - 5)(t - 7)$

D. $(3d + 5)(t - 7)$

18. Factor: $8r^2 + 12r$

A. $2r(4r + 3)$

B. $4r(2r + 3)$

C. $8r(2r + 3)$

D. $4r(2r - 3)$

19. Factor: $21th - 3t - 35h + 5$

A. $(3t + 5)(7h + 1)$

B. $(3t - 5)(7h + 1)$

C. $(3t - 5)(7h - 1)$

D. $(3t + 5)(7h - 1)$

20. Factor: $vp + 12v + 8p + 96$

A. $(v + 8)(p - 12)$

B. $(v - 8)(p + 12)$

C. $(v + 8)(p + 12)$

D. $(v - 8)(p - 12)$

21. Factor: $5br - 25b + 2r - 10$

A. $(5b - 2)(r + 5)$

B. $(5b + 2)(r - 5)$

C. $(5b + 2)(r + 5)$

D. $(5b - 2)(r - 5)$

22. Factor: $2nu - 8u + 3n - 12$

A. $(2u - 3)(n - 4)$

B. $(2u + 3)(n + 4)$

C. $(2u + 3)(n - 4)$

D. $(2u - 3)(n + 4)$

23. Factor: $b^2 - 2b + 3b - 6$

A. $(b - 3)(b - 2)$

B. $(b + 3)(b - 2)$

C. $(b - 3)(b + 2)$

D. $(b + 3)(b + 2)$

24. Factor: $2j^2 + 2j + 3j + 3$

A. $(2j - 3)(j - 1)$

B. $(2j - 3)(j + 1)$

C. $(2j + 3)(j + 1)$

D. $(2j + 3)(j - 1)$

25. Factor: $2a^2 - 4a + a - 2$

A. $(2a - 1)(a + 2)$

B. $(2a - 1)(a - 2)$

C. $(2a + 1)(a + 2)$

D. $(2a + 1)(a - 2)$

26. Factor: $7x + 49$

A. $7(x - 7)$

B. $49(x + 7)$

C. $7(x + 7)$

D. $7(x + 49)$

27. Factor: $8m - 6$

A. $8(m - 3)$

B. $2(4m - 3)$

C. $4(2m - 3)$

D. $2(4m + 3)$

28. Factor: $5a^2 - 15$

A. $5(a^2 + 3)$

B. $a(5a - 15)$

C. $5(a - 3)(a + 3)$

D. $5(a^2 - 3)$

29. Factor: $10q - 25q^2$

A. $5q(2 - 5q)$

B. $5q(2 + 5q)$

C. $q(10 - 25q)$

D. $10q - 5q^2$

30. Factor: $a^2b^2 + a$

A. $a(ab^2 + 1)$

B. $a^2(b^2 + 1)$

C. $a(ab^2 - 1)$

D. $a(b^2 + 1)$

31. Factor: $x + x^2y + x^3y^2$

A. $x(1 + x^2y + x^2y^2)$

B. $x(1 + xy + x^2y^2)$

C. $x(1 + xy + x^3y^2)$

D. $x(1 + xy + xy^2)$

32. Factor: $3p^2r^2 + 6pr + p$

A. $3p(pr^2 + 2r + 1)$

B. $p(3p r^2 + 6pr + 1)$

C. $p(3pr^2 + 6r + 1)$

D. $p(3pr^2 + 6r - 1)$

33. Factor: $4a^2b^2 + 16ab + 12a$

A. $4a(ab^2 + 4b + 3)$

B. $a(4ab^2 + 16b + 12)$

C. $4a(ab^2 + 4b + 3)$

D. $4a^2b^2(1 + 4b + 3)$

34. Factor: $10h^3n^3 - 2hn^2 + 14hn$

A. $2hn(5h^2n^2 - n + 7)$

B. $hn(10h^2n^2 - 2n + 14)$

C. $2hn(5h^2n^2 + n + 7)$

D. $2hn(5h^2n^2 - n - 7)$

35. Factor: $48a^2b^2 - 12ab$

A. $12ab(4ab - 1)$

B. $6ab(8ab - 1)$

C. $12ab(4a b^2 - 1)$

D. $12ab(4ab + 1)$

36. Factor: $6x^2y - 21y^2w + 24xw$

A. $3(2x^2y - 7y^2w - 8xw)$

B. $3(2x^2y - 7yw + 8xw)$

C. $3(2x^2y - 7y^2w + 8xw)$

D. $3(2x^2y - 7y^2w + 8xw)$

37. Factor: $x^2 + 3x + x + 3$

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

B. $(x + 3)(x + 1)$

C. $(x - 3)(x - 1)$

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

38. Factor: $2x^2 - 5x + 6x - 15$

A. $(2x - 5)(x + 3)$

B. $(2x + 5)(x + 3)$

C. $(2x + 5)(x - 3)$

D. $(2x - 5)(x - 3)$

39. Factor: $3n^2 + 6np - np - 2p^2$

A. $(3n - p)(n + 2p)$

B. $(3n + p)(n + 2p)$

C. $(3n + p)(n - 2p)$

D. $(3n - p)(n - 2p)$

40. Factor: $4x^2 - 1.2x + 0.5x - 0.15$

A. $(2x - 0.3)(2x - 0.5)$

B. $(2x + 0.3)(2x + 0.5)$

C. $(4x - 0.15)(x + 1)$

D. $(2x - 0.3)(2x + 0.5)$

41. Factor: $9x^2 - 3xy + 6x - 2y$

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

B. $(3x + 1)(3x + 2y)$

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

D. $(3x + 1)(3x - 2y)$

42. Factor: $3x^2 + 24x - 1.5x - 12$

A. $(3x - 1.5)(x + 8)$

B. $(3x + 1.5)(x - 8)$

C. $(3x - 1.5)(x - 8)$

D. $(3x + 1.5)(x + 8)$

43. Factor: $2x^2 - 0.6x + 3x - 0.9$

A. $(2x - 3)(x - 0.3)$

B. $(2x - 3)(x + 0.3)$

C. $(2x + 3)(x - 0.3)$

D. $(2x + 3)(x + 0.3)$

44. Factor: $h = 80t - 16t^2$. Factor the expression.

A. $8t(10 - t)$

B. $16t(5 - t)$

C. $(16t)(5 + t)$

D. $16t(5 - t^2)$