

BADAA AL MUTAWA SCHOOL

MATHEMATICS — FACTORING & PERFECT SQUARE TRINOMIALS-M11L7 – Factoring Special Products

Student Name: _____	Grade: _____
Date: _____	Subject: Mathematics
Subject Teacher: Abdulkader Amro	Total Questions: 35

Choose the one correct answer for each question.

SECTION A • FACTOR EACH POLYNOMIAL, IF POSSIBLE

22. $36t^2 - 24t + 4$

A. $4(3t - 1)^2$

B. $(3t - 2)^2$

C. $(6t - 2)^2$

D. $(6t + 2)^2$

23. $4h^2 - 56$

A. $4(h - 14)(h + 14)$

B. $4(h^2 - 7)$

C. $(2h - 7)(2h + 7)$

D. $4(h^2 - 14)$

24. $17a^2 - 24ab$

A. $17a(a - 24b)$

B. $a(17a + 24b)$

C. $b(17a - 24b)$

D. $a(17a - 24b)$

25. $q^2 - 14q + 36$

A. $(q - 6)(q - 6)$

B. prime

C. $(q - 4)(q - 9)$

D. $(q + 6)(q - 6)$

26. $y^2 + 24y + 144$

A. $(y + 6)^2$

B. $(y + 12)(y - 12)$

C. $(y + 12)^2$

D. $(y - 12)^2$

27. $6d^2 - 96$

A. $6(d - 8)(d + 12)$

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

C. $(6d - 4)(d + 4)$

D. $6(d - 16)(d + 6)$

28. $1 - 49d^2$

A. $(1 - 7d)(1 + 7d)$

B. $(1 - 7d)^2$

C. $(1 - 49d)(1 + d)$

D. $(7d - 1)(7d + 1)$

29. $-16 + p^2$

A. $(p - 4)^2$

B. $(p - 8)(p + 2)$

C. $(p - 16)(p + 1)$

D. $(p - 4)(p + 4)$

30. $k^2 + 25$

A. $(k + 5)(k - 5)$

B. $(k + 25)(k - 1)$

C. $(k + 5)^2$

D. prime

31. $36 - 100w^2$

A. $4(3 - 5w)(3 + 5w)$

B. $4(3 - 10w)(3 + 10w)$

C. $(6 - 10w)(6 + 10w)$

D. $(6 - 5w)(6 + 5w)$

32. $64m^2 - 9y^2$

A. $(8m - 3y)^2$

B. $(64m - 3y)(m + 3y)$

C. $(8m - 3y)(8m + 3y)$

D. $(8m - 9y)(8m + y)$

33. $4h^2 - 25g^2$

A. $(2h - 5g)^2$

B. $(2h - 5g)(2h + 5g)$

C. $(4h - 5g)(h + 5g)$

D. $(2h - 25g)(2h + g)$

34. $x^3 + 3x^2 - 4x - 12$

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

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

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

D. $(x + 3)(x - 4)(x + 1)$

35. $8x^2 - 72p^2$

A. $8(x - 3p)^2$

B. $(8x - 72p)(x + p)$

C. $8(x - 3p)(x + 3p)$

D. $8(x - 6p)(x + 6p)$

36. $20q^2 - 5r^2$

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

B. $(20q - 5r)(q + r)$

C. $5(2q - r)(2q + r)$

D. $5(4q - r)(q + r)$

37. $32d^2 - 50b^2$

A. $(8d - 10b)(4d + 5b)$

B. $2(4d - 5b)^2$

C. $2(4d - 5b)(4d + 5b)$

D. $2(16d - 25b)(d + b)$

38. $16b^2 - 100$

A. $4(2b - 5)^2$

B. $4(4b - 5)(4b + 5)$

C. $(16b - 100)(b + 1)$

D. $4(2b - 5)(2b + 5)$

39. $49x^2 - 64y^2$

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

B. $(7x - 8y)(7x + 8y)$

C. $(7x - 4y)(7x + 16y)$

D. $(49x - 64y)(x + y)$

40. $3n^4 - 42n^3 + 147n^2$

A. $n^2(3n - 21)^2$

B. $3n(n - 7)(n - 21)$

C. $3n^2(n - 3)(n - 49)$

D. $3n^2(n - 7)^2$

41. $8m^3 - 24m^2 + 18m$

A. $2m(4m - 3)(m - 3)$

B. $2m(2m + 3)^2$

C. $2m(2m - 3)^2$

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

42. $x^2 - 49$

A. $(x + 49)(x - 1)$

B. $(x - 49)(x + 1)$

C. $(x + 7)(x - 7)$

D. $(x + 7)^2$



43. $a^2 - 25$; length = 105 yd

A. width = 105 yd

B. width = 125 yd

C. width = 80 yd

D. width = 100 yd

44. Surface area of a metal washer with outside diameter D and inside diameter d

A. $\pi/4(D^2 - d^2)$

B. $2\pi(D - d)$

C. $\pi/4(D^2 + d^2)$

D. $\pi(D^2 - d^2)$



SECTION B • PERFECT SQUARE TRINOMIALS

45. $m^2 - 6m + 9$

A. No; prime

B. Yes; $(m - 3)^2$

C. Yes; $(m - 6)^2$

D. Yes; $(m + 3)^2$

46. $r^2 + 4r + 4$

A. No; prime

B. Yes; $(r - 2)^2$

C. Yes; $(r + 4)^2$

D. Yes; $(r + 2)^2$

47. $g^2 - 14g + 49$

A. No; prime

B. Yes; $(g - 14)^2$

C. Yes; $(g + 7)^2$

D. Yes; $(g - 7)^2$

48. $2w^2 - 4w + 9$

A. Yes; $(2w - 3)^2$

B. Yes; $(2w + 3)^2$

C. Yes; $(w - 2)^2$

D. No

49. $4d^2 - 4d + 1$

A. Yes; $(2d - 1)^2$

B. Yes; $(2d + 1)^2$

C. Yes; $(d - 1)^2$

D. No; prime

50. $9n^2 + 30n + 25$

A. Yes; $(9n + 5)^2$

B. Yes; $(3n + 5)^2$

C. Yes; $(3n - 5)^2$

D. No; prime

51. $9z^2 - 6z + 1$

A. Yes; $(3z + 1)^2$

B. Yes; $(3z - 1)^2$

C. No; prime

D. Yes; $(9z - 1)^2$

52. $36x^2 - 60x + 25$

A. Yes; $(6x + 5)^2$

B. Yes; $(3x - 5)^2$

C. No; prime

D. Yes; $(6x - 5)^2$

53. $49r^2 + 14r + 4$

A. No; prime

B. Yes; $(49r + 2)^2$

C. Yes; $(7r - 2)^2$

D. Yes; $(7r + 2)^2$

54. $a^2 + 14a + 49$

A. Yes; $(a - 7)^2$

B. No; prime

C. Yes; $(a + 7)^2$

D. Yes; $(a + 14)^2$

55. $t^2 - 18t + 81$

A. Yes; $(t - 18)^2$

B. No; prime

C. Yes; $(t + 9)^2$

D. Yes; $(t - 9)^2$

56. $4c^2 + 2cd + d^2$

A. Yes; $(2c + d)^2$

B. Yes; $(2c - d)^2$

C. No

D. Yes; $(c + d)^2$