

WKF S2 term break assignment-identities and factorization

Grade 8 Mathematics Term 1 Term Break Assignment

Name: _____ (_____)

Date: _____

Class: _____

Grade: _____

Content: Ch.2 Identities and Factorization

Number of terms = 2

1. $x^2 - 25$

20. $27x^2 - 3y^2$

2. $16x^2 - 1$

21. $20 - 5x^2$

3. $4a^2 - 1$

22. $m^2n^2 - 49$

4. $25b^2 - 4$

23. $x^3 - 64x$

5. $36y^2 - 49$

24. $a^3 - a^5$

6. $9m^2 - 100$

25. $1 - 4a^2b^4$

7. $4 - 9y^2$

26. $x^2 - 4m^2n^2$

8. $49 - x^2$

27. $2a^2 - 50$

9. $x^2 - 4a^2$

28. $20x^2 - 5y^2$

10. $16m^2 - 9n^2$

29. $12a^4 - 3b^6$

11. $100x^2 - 49y^2$

30. $\frac{x^2}{9} - \frac{y^2}{25}$

12. $121a^2 - 81b^2$

31. $x^3 - 9x$

13. $25x^4 - 16$

32. $x^4 - 1$

14. $x^6 - 36$

33. $324 - 4k^4$

15. $x^{100} - 100$

34. $-81 + 16x^4$

16. $x^4 - 4y^2$

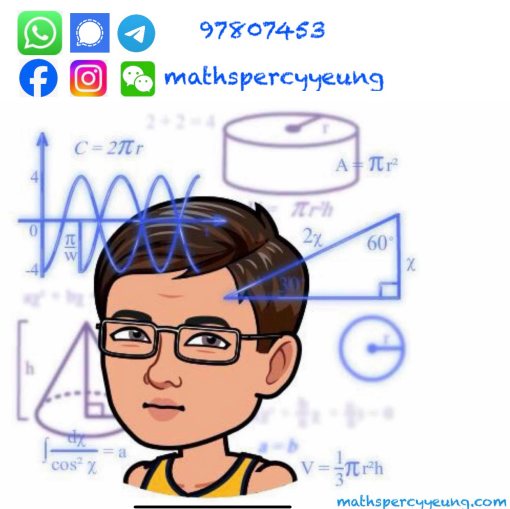
35. $256a^4 - b^4$

17. $2x^2 - 98$

36. $225 - a^2b^4$

18. $125 - 5a^2$

19. $9 - 9y^2$



Number of terms = 3

37. $x^2 + 2x + 1$

38. $g^2 + 10g + 25$

39. $y^2 - 8y + 16$

40. $9b^2 + 12b + 4$

41. $4x^2 - 12x + 9$

42. $25 - 20x + 4x^2$

43. $16 + 24n + 9n^2$

44. $8m^2 - 8m + 2$

45. $27y^2 + 18y + 3$

46. $x^2 + 4xy + 4y^2$

47. $9y^2 - 24yz + 16z^2$

48. $25a^2 + 80ab + 64b^2$

49. $25m^2 - 40mn + 16n^2$

50. $2a^2 - 28ab + 98b^2$

51. $80r^2 + 40rs + 5s^2$

52. $x^2 + 4xyz + 4y^2z^2$

53. $9p^2 - 6pqr + q^2r^2$

54. $a^4 - 2a^2 + 1$

55. $x^4 - 8x^2y^2 + 16y^4$

56. $x^2 + 14xy + 49y^2$

57. $4y^2 - 44y + 121$

58. $36a^2b^2 - 12ab + 1$

59. $6x^2 + 12x + 6$

60. $9x^2 - 2x + \frac{1}{9}$

61. $\frac{1}{4} - 5xy + 25x^2y^2$

62. $a^2 + 2 + \left(\frac{1}{a}\right)^2$

63. $3a^2 - 2ab + \frac{b^2}{3}$

64. $a^3 - 10a^2 + 25a$

65. $24b - 24b^2 + 6b^3$

66. $k^4 + 26k^2 + 169$

67. $m^4 - 2m^2n^2 + n^4$

68. $20x^4 + 60x^2 + 45$

69. $2a^6 - 24a^4 + 72a^2$

70. $b^4 - 18b^2 + 81$

71. $256l^4 - 32l^2m^2 + m^4$

Number of terms = 4

72. $x^2 - y^2 + x - y$

73. $p^2 - q^2 + 4q + 4p$

74. $a^2 - b^2 + bc - ac$

75. $4x^2 - y^2 - 8x - 4y$

76. $9m^2 - 16n^2 + 4kn - 3km$

77. $16m^2 + 24mn + 9n^2 - y^2$

78. $25 - x^2 + 2xy - y^2$

79. $4 - x^2 + 2xy - y^2$

80. $\pi R^2 - \pi r^2 + ar + aR$

81. $2xy + 6x^2 - 72x^3y - x$

82. $4x^2 - 20x + 25 - y^2$

83. $z^2 - 16x^2 + 72xy - 81y^2$

84. $4y^2 - 4x^2 - 12x - 9$

85. $8ax - 3ay - 6a^2y + 16a^2x$

86. $3a^2 - 24ab + 21a - 168b$

87. $x^2 - y^2 - 3x + 3y$

88. $4y - xy + 4z - xz$

89. $4x - 7xy - 4x^2 + 7y$



Number of terms = 6

90. $ab - 12cd - 8ce + 2ae + 3ad - 4bc$

91. $4ms - 2n^2 - ns + 8mn + 12m - 3n$

92. $ax - ay + bx - by + cx - cy$

93. $a + b + c - pa - pb - pc$

94. $Ax + Cy + Bx + By + Ay + Cx$

Questions with brackets

95. $(p+q)^2 - 144$

96. $225 - (c+2d)^2$

97. $(1+x)^2 - 9$

98. $16a^2 - (4a-b)^2$

99. $4(m+n)^2 - n^2$

100. $9(h+k)^2 - 16k^2$

101. $1 - 4(x-y)^2$

102. $(x+2y)^2 - 16b^2$

103. $(x+1)^2 - (x-1)^2$

104. $(5-y)^2 - (2y+1)^2$

105. $(3a-2)^2 - (2a-3)^2$

106. $9(x+y)^2 - (x-y)^2$

107. $(2a-b)^2 - 16(3c-d)^2$

108. $81(x-y)^2 - 64(2x+1)^2$

109. $(x-y)^2 - 4(x-y) + 4$

110. $(x+2y)^2 + 8(x+2y) + 16$

111. $9(a+3)^2 + 6(a+3) + 1$

112. $16(p-5)^2 - 8(p-5) + 1$

113. $36(c-2d)^2 + 60(c-2d) + 25$

114. $16(2x-3y)^2 - 24(2x-3y) + 9$

115. $(a^2 + 8a + 16) - b^2$

116. $(x^2 - 2xy + y^2) - 9$

117. $e^2 - (h^2 + 2h + 1)$

118. $4(x-y)^2 + 4z(x-y) + z^2$

119. $(a+b)^2 + 2a(a+b) + a^2$

120. $(m-n)^2 - 30n(m-n) + 225n^2$

121. $(x+y)^2 - 2(x+y)(x-y) + (x-y)^2$

122. $4(a+b)^2 + 4(a+b)(x-y) + (x-y)^2$

123. $z^2 - (16x^2 - 40xy + 25y^2)$

Using previous part(s) or "Hence" questions

124)(a) Factorize $25t^2 + 20t + 4$

(b) Hence, factorize $25(t - y)(t + y) + 20t + 4$

125)(a) Factorize $4x^2 - 20xy + 25y^2$

(b) Hence, factorize $625y^2 - 4x^2 + 20xy - 25y^2$

126)(a) Factorize $2x^2y^2 - 18x^2y^4$

(b) Hence, factorize $2x^2y^2 - 18x^2y^4 - 12x^2y + 4x^2$

127)(a) Factorize $16x^2 + 8x + 1$

(b) Hence, factorize $y^2 - 16x^2 - 8x - 1$

128)(a) Factorize $36x^2 + 12x + 1$

(b) Factorize $49y^2 - 28y + 4$

(c) Hence, factorize $36x^2 + 12x - 49y^2 + 28y - 3$

129)(a) Factorize $x^2 - \frac{1}{4}$

(b) Hence, factorize $x^4 - \frac{1}{16}$

130)(a) Factorize $x^2 - 12x + 36$

(b) Expand $(x - 3)^2$

(c) Peter claims that $2x^2 - 18x + 45$ is always positive for all values of x .
Do you agree? Explain your answer.?

131)(a) Factorize $9a^2 - 16b^2$

(b) Factorize $9(m - n)^{2014} - 16(n - m)^{2014}$

132)(a) Factorize $8x^2 - 50$

(b) Hence, factorize $8x^2 - 50 + 2xy - 5y$

END OF ASSIGNMENT