Ⅱ 식의 계산

Ⅱ－1 다항식의 곱셈 공식

pp. 52~66

01 답 $xy+3x+5y+15$

분배법칙을 이용하여 전개하면

$(x+5)(y+3)=xy+\boxed{3}x+\boxed{5}y+\boxed{15}$

02 답 $2ac+4ad-bc-2bd$

분배법칙을 이용하여 전개하면

$(2a-b)(c+2d)=2ac+4ad-bc-2bd$

03 답 $xy-4x+y-4$

분배법칙을 이용하여 전개하면

$(x+1)(y-4)=xy-4x+y-4$

04 답 $ac-ad-bc+bd$

분배법칙을 이용하여 전개하면

$(a-b)(c-d)=ac-ad-bc+bd$

05 답 $2ac+ad-6bc-3bd$

분배법칙을 이용하여 전개하면

$(a-3b)(2c+d)=2ac+ad-6bc-3bd$

06 답 x^2-5x+6

(주어진 식)$=x^2-3x-\boxed{2}x+\boxed{6}$

$=x^2-\boxed{5}x+\boxed{6}$

07 답 $a^2+7a+10$

(주어진 식)$=a^2+5a+2a+10$

$=a^2+7a+10$

08 답 $x^2+8x+12$

(주어진 식)$=x^2+6x+2x+12$

$=x^2+8x+12$

09 답 a^2-a-12

(주어진 식)$=a^2+3a-4a-12$

$=a^2-a-12$

10 답 a^2-1

(주어진 식)$=a^2-a+a-1$

$=a^2-1$

11 답 $x^2+3xy+2y^2$

(주어진 식)$=x^2+\boxed{2}xy+xy+\boxed{2}y^2$

$=x^2+\boxed{3}xy+\boxed{2}y^2$

12 답 $2a^2+2ab-12b^2$

(주어진 식)$=2a^2-4ab+6ab-12b^2$

$=2a^2+2ab-12b^2$

13 답 $6a^2+5ab-4b^2$

(주어진 식)$=6a^2-3ab+8ab-4b^2$

$=6a^2+5ab-4b^2$

14 답 $2x^2+5xy+2y^2$

(주어진 식)$=2x^2+xy+4xy+2y^2$

$=2x^2+5xy+2y^2$

15 답 $6x^2-14xy+4y^2$

(주어진 식)$=6x^2-12xy-2xy+4y^2$

$=6x^2-14xy+4y^2$

16 답 $-6a^2+5ab+6b^2$

(주어진 식)$=-6a^2+9ab-4ab+6b^2$

$=-6a^2+5ab+6b^2$

17 답 $2x^2+3xy-3x+y^2-3y$

(주어진 식)$=2x^2+xy-3x+2xy+y^2-3y$

$=2x^2+3xy-3x+y^2-3y$

18 답 $8x^2-18xy+4x+9y^2-6y$

(주어진 식)$=8x^2-6xy+4x-12xy+9y^2-6y$

$=8x^2-18xy+4x+9y^2-6y$

19 답 $6x^2-7xy+15x-3y^2+5y$

(주어진 식)$=6x^2+2xy-9xy-3y^2+15x+5y$

$=6x^2-7xy+15x-3y^2+5y$

20 답 $6a^2+7ab+8a+2b^2+4b$

(주어진 식)$=6a^2+4ab+8a+3ab+2b^2+4b$

$=6a^2+7ab+8a+2b^2+4b$

21 답 1) 분배법칙

2) ① 동류, 동류 ② 높은 ③ 알파벳

22 답 $a^2+10a+25$

(주어진 식)$=a^2+2\times a\times\boxed{5}+5^2=a^2+\boxed{10}a+\boxed{25}$

23 답 $x^2+12x+36$

(주어진 식)$=x^2+2\times x\times 6+6^2$

$=x^2+12x+36$

24 답 y^2+6y+9

(주어진 식)$=y^2+2\times y\times 3+3^2$

$=y^2+6y+9$

25 답 $4a^2+4a+1$

(주어진 식)$=(2a)^2+2\times 2a\times 1+1^2$

$=4a^2+4a+1$

26 답 $9x^2+12x+4$

(주어진 식)$=(3x)^2+2\times 3x\times 2+2^2$

$=9x^2+12x+4$

27 답 $4x^2+4xy+y^2$

(주어진 식)$=(2x)^2+2\times 2x\times \boxed{y}+\boxed{y}^2$

$=\boxed{4}x^2+\boxed{4}xy+\boxed{y}^2$

28 답 $4x^2+12xy+9y^2$

(주어진 식)$=(2x)^2+2\times 2x\times 3y+(3y)^2$

$=4x^2+12xy+9y^2$

29 답 $25a^2+20ab+4b^2$

(주어진 식)$=(5a)^2+2\times 5a\times 2b+(2b)^2$

$=25a^2+20ab+4b^2$

30 답 $4x^2+36xy+81y^2$

(주어진 식)$=(2x)^2+2\times 2x\times 9y+(9y)^2$

$=4x^2+36xy+81y^2$

31 답 $x^2+4xy+4y^2$

(주어진 식)$=\{-(x+2y)\}^2=(-1)^2\times(x+2y)^2$

$=x^2+2\times x\times 2y+(2y)^2$

$=x^2+4xy+4y^2$

32 답 $a^2+14ab+49b^2$

(주어진 식)$=\{-(a+7b)\}^2=(-1)^2\times(a+7b)^2$

$=a^2+2\times a\times 7b+(7b)^2$

$=a^2+14ab+49b^2$

33 답 x^2-4x+4

(주어진 식)$=x^2-2\times x\times \boxed{2}+\boxed{2}^2$

$=x^2-\boxed{4}x+\boxed{4}$

34 답 $y^2-14y+49$

(주어진 식)$=y^2-2\times y\times 7+7^2$

$=y^2-14y+49$

35 답 $25x^2-10x+1$

(주어진 식)$=(5x)^2-2\times 5x\times 1+1^2$

$=25x^2-10x+1$

36 답 $4a^2-12a+9$

(주어진 식)$=(2a)^2-2\times 2a\times 3+3^2$

$=4a^2-12a+9$

37 답 $9a^2-42a+49$

(주어진 식)$=(3a)^2-2\times 3a\times 7+7^2$

$=9a^2-42a+49$

38 답 $16x^2-16x+4$

(주어진 식)$=(4x)^2-2\times 4x\times 2+2^2$

$=16x^2-16x+4$

39 답 $9x^2-6xy+y^2$

(주어진 식)$=(\boxed{3x})^2-2\times\boxed{3x}\times y+y^2$

$=\boxed{9}x^2-\boxed{6}xy+y^2$

40 답 $9x^2-12xy+4y^2$

(주어진 식)$=(3x)^2-2\times 3x\times 2y+(2y)^2$

$=9x^2-12xy+4y^2$

41 답 $16a^2-40ab+25b^2$

(주어진 식)$=(4a)^2-2\times 4a\times 5b+(5b)^2$

$=16a^2-40ab+25b^2$

42 답 $4a^2-4ab+b^2$

(주어진 식)$=\{-(2a-b)\}^2=(-1)^2\times(2a-b)^2$

$=(2a)^2-2\times 2a\times b+b^2$

$=4a^2-4ab+b^2$

43 답 $9x^2-12xy+4y^2$

(주어진 식)$=\{-(3x-2y)\}^2=(-1)^2\times(3x-2y)^2$

$=(3x)^2-2\times 3x\times 2y+(2y)^2$

$=9x^2-12xy+4y^2$

44 답 1) $a^2+2ab+b^2$

2) $a^2-2ab+b^2$

45 답 x^2-4

(주어진 식)$=x^2-\boxed{2}^2=x^2-\boxed{4}$

46 답 x^2-9

(주어진 식)$=x^2-3^2=x^2-9$

47 답 $25x^2-16$

(주어진 식)$=(5x)^2-4^2=25x^2-16$

48 답 $9a^2-4$

(주어진 식)$=(3a)^2-2^2=9a^2-4$

49 답 $16a^2-9$

(주어진 식)$=(4a)^2-3^2=16a^2-9$

50 답 x^2-9y^2

(주어진 식)$=x^2-(\boxed{3y})^2=x^2-\boxed{9y^2}$

51 답 $25x^2-y^2$

(주어진 식)$=(5x)^2-y^2=25x^2-y^2$

52 답 $4x^2-25y^2$

(주어진 식)$=(2x)^2-(5y)^2=4x^2-25y^2$

53 답 $4a^2-49b^2$

(주어진 식)$=(2a)^2-(7b)^2=4a^2-49b^2$

54 답 $4a^2-81b^2$

(주어진 식)$=(2a)^2-(9b)^2=4a^2-81b^2$

55 답 $-4a^2+49$

(주어진 식)$=(7+\boxed{2a})(7-\boxed{2a})$

$=7^2-(\boxed{2a})^2=49-\boxed{4}a^2$

$=-\boxed{4}a^2+49$

56 답 $-16x^2+9$

(주어진 식)$=(3+4x)(3-4x)=3^2-(4x)^2$

$=9-16x^2=-16x^2+9$

57 답 $-9x^2+4$

(주어진 식)$=(2+3x)(2-3x)=2^2-(3x)^2$

$=4-9x^2=-9x^2+4$

58 답 $49x^2-4$

(주어진 식)$=(\boxed{-7x})^2-2^2=\boxed{49}x^2-\boxed{4}$

59 답 x^2-36

(주어진 식)$=(-x)^2-6^2=x^2-36$

60 답 $25a^2-4$

(주어진 식)$=(-5a)^2-2^2=25a^2-4$

61 답 $-4a^2+9b^2$

(주어진 식)$=(3b+\boxed{2a})(3b-\boxed{2a})$

$=(3b)^2-(\boxed{2a})^2$

$=\boxed{9}b^2-\boxed{4}a^2$

$=-\boxed{4}a^2+\boxed{9}b^2$

62 답 $-4x^2+81y^2$

(주어진 식)$=(9y-2x)(9y+2x)$

$=(9y+2x)(9y-2x)$

$=(9y)^2-(2x)^2$

$=81y^2-4x^2=-4x^2+81y^2$

63 답 $16x^2-49y^2$

(주어진 식)$=(-4x)^2-(7y)^2=16x^2-49y^2$

64 답 $9a^2-25b^2$

(주어진 식)$=(-3a)^2-(5b)^2=9a^2-25b^2$

65 답 a^2-b^2

66 답 $x^2+7x+12$

(주어진 식)$=x^2+(\boxed{3}+4)x+\boxed{3}\times4$

$=x^2+\boxed{7}x+\boxed{12}$

67 답 $x^2+8x+15$

(주어진 식)$=x^2+(5+3)x+5\times3$

$=x^2+8x+15$

68 답 x^2+8x+7

(주어진 식)$=x^2+(1+7)x+1\times7$

$=x^2+8x+7$

69 답 $x^2+8x+12$

(주어진 식)$=x^2+(6+2)x+6\times2$

$=x^2+8x+12$

70 답 $x^2+9x+14$

(주어진 식)$=x^2+(2+7)x+2\times7$

$=x^2+9x+14$

71 답 x^2+2x-8

(주어진 식)$=x^2+\{\boxed{4}+(-2)\}x+\boxed{4}\times(-2)$

$=x^2+\boxed{2}x-\boxed{8}$

72 답 x^2-8x-9

(주어진 식)$=x^2+\{1+(-9)\}x+1\times(-9)$

$=x^2-8x-9$

73 답 $x^2+4x-21$

(주어진 식)$=x^2+\{(-3)+7\}x+(-3)\times7$

$=x^2+4x-21$

74 답 x^2-5x-6

(주어진 식)$=x^2+\{(-6)+1\}x+(-6)\times1$

$=x^2-5x-6$

75 답 $x^2-5x-36$

(주어진 식)$=x^2+\{(-9)+4\}x+(-9)\times4$

$=x^2-5x-36$

76 답 $x^2-7x+10$

(주어진 식)$=x^2+\{(\boxed{-2})+(-5)\}x+(\boxed{-2})\times(-5)$

$=x^2-\boxed{7}x+\boxed{10}$

77 답 x^2-6x+5

(주어진 식)$=x^2+\{(-5)+(-1)\}x+(-5)\times(-1)$

$=x^2-6x+5$

78 답 $x^2-9x+18$

(주어진 식)$=x^2+\{(-3)+(-6)\}x+(-3)\times(-6)$

$=x^2-9x+18$

79 답 $x^2-12x+35$

(주어진 식)$=x^2+\{(-5)+(-7)\}x+(-5)\times(-7)$

$=x^2-12x+35$

80 답 $x^2-11x+18$

(주어진 식)$=x^2+\{(-9)+(-2)\}x+(-9)\times(-2)$

$=x^2-11x+18$

81 답 $x^2-13x+42$

(주어진 식)$=x^2+\{(-7)+(-6)\}x+(-7)\times(-6)$

$=x^2-13x+42$

82 답 $x^2+4xy+3y^2$

(주어진 식)$=x^2+(\boxed{3y}+\boxed{y})x+\boxed{3y}\times\boxed{y}$

$=x^2+\boxed{4}xy+\boxed{3}y^2$

83 답 $x^2-3xy-10y^2$

(주어진 식)$=x^2+\{2y+(-5y)\}x+2y\times(-5y)$

$=x^2-3xy-10y^2$

84 답 $x^2+2xy-24y^2$

(주어진 식)$=x^2+\{(-4y)+6y\}x+(-4y)\times6y$

$=x^2+2xy-24y^2$

85 답 $x^2-10xy+21y^2$

(주어진 식)$=x^2+\{(-7y)+(-3y)\}x+(-7y)\times(-3y)$

$=x^2-10xy+21y^2$

86 답 $x^2+(a+b)x+ab$

87 답 $6x^2+19x+15$

(주어진 식)

$=(2\times3)x^2+(2\times\boxed{5}+3\times\boxed{3})x+3\times\boxed{5}$

$=6x^2+\boxed{19}x+\boxed{15}$

88 답 $8x^2+26x+15$

(주어진 식)$=(2\times4)x^2+(2\times3+5\times4)x+5\times3$

$=8x^2+26x+15$

89 답 $6x^2+23x+21$

(주어진 식)$=(3\times2)x^2+(3\times3+7\times2)x+7\times3$

$=6x^2+23x+21$

90 답 $18x^2+69x+56$

(주어진 식)$=(6\times3)x^2+(6\times8+7\times3)x+7\times8$

$=18x^2+69x+56$

91 답 $21x^2+13x+2$

(주어진 식)$=(7\times3)x^2+(7\times1+2\times3)x+2\times1$

$=21x^2+13x+2$

92 답 $12x^2-2x-2$

(주어진 식)

$=(3\times4)x^2+\{3\times(\boxed{-2})+1\times\boxed{4}\}x+1\times(\boxed{-2})$

$=12x^2-\boxed{2}x-\boxed{2}$

93 답 $6x^2-17x-14$

(주어진 식)$=(3\times2)x^2+\{3\times(-7)+2\times2\}x+2\times(-7)$

$=6x^2-17x-14$

94 답 $21x^2-2x-8$

(주어진 식)$=(3\times7)x^2+\{3\times4+(-2)\times7\}x+(-2)\times4$

$=21x^2-2x-8$

95 답 $20x^2+3x-9$

(주어진 식)$=(5\times4)x^2+\{5\times3+(-3)\times4\}x+(-3)\times3$

$=20x^2+3x-9$

96 답 $35x^2+41x-24$

(주어진 식)$=(7\times5)x^2+\{7\times8+(-3)\times5\}x+(-3)\times8$

$=35x^2+41x-24$

97 답 $10x^2-33x+20$

(주어진 식)$=(2\times5)x^2+\{2\times(\boxed{-4})+(-5)\times\boxed{5}\}x$

$+(-5)\times(\boxed{-4})$

$=10x^2-\boxed{33}x+\boxed{20}$

98 답 $4x^2-27x+18$

(주어진 식)$=(4\times1)x^2+\{4\times(-6)+(-3)\times1\}x$

$+(-3)\times(-6)$

$=4x^2-27x+18$

99 답 $24x^2-43x+5$

(주어진 식)$=(3\times8)x^2+\{3\times(-1)+(-5)\times8\}x$

$+(-5)\times(-1)$

$=24x^2-43x+5$

100 답 $10x^2-59x+63$

(주어진 식)$=(5\times2)x^2+\{5\times(-9)+(-7)\times2\}x$

$+(-7)\times(-9)$

$=10x^2-59x+63$

101 답 $8x^2-38x+35$

(주어진 식)$=(4\times2)x^2+\{4\times(-7)+(-5)\times2\}x$

$+(-5)\times(-7)$

$=8x^2-38x+35$

102 답 $12x^2-28x+15$

(주어진 식)$=(6\times2)x^2+\{6\times(-3)+(-5)\times2\}x$

$+(-5)\times(-3)$

$=12x^2-28x+15$

103 답 $18x^2+21xy+5y^2$

(주어진 식)

$=(3\times6)x^2+(3\times\boxed{5y}+y\times\boxed{6})x+y\times\boxed{5y}$

$=18x^2+\boxed{21}xy+\boxed{5}y^2$

104 답 $6x^2+7xy-5y^2$

(주어진 식)$=(3\times2)x^2+\{3\times(-y)+5y\times2\}x$

$+5y\times(-y)$

$=6x^2+7xy-5y^2$

105 답 $21x^2-16xy-16y^2$

(주어진 식)$=(3\times7)x^2+\{3\times4y+(-4y)\times7\}x$

$+(-4y)\times4y$

$=21x^2-16xy-16y^2$

106 답 $6x^2-49xy+49y^2$

(주어진 식)$=(1\times6)x^2+\{-1\times(-7y)+(-7y)\times6\}x$

$+(-7y)\times(-7y)$

$=6x^2-49xy+49y^2$

107 답 $-12x^2+17xy-6y^2$

(주어진 식)$=\{(-3)\times4\}x^2+\{(-3)\times(-3y)+2y\times4\}x$

$+2y\times(-3y)$

$=-12x^2+17xy-6y^2$

108 답 $acx^2+(ad+bc)x+bd$

109 답 961

$31^2=(30+\boxed{1})^2=900+\boxed{60}+1=\boxed{961}$

110 답 5184

$72^2=(70+2)^2=4900+280+4=5184$

111 답 10201

$101^2=(100+1)^2=10000+200+1=10201$

112 답 10609

$103^2=(100+3)^2=10000+600+9=10609$

113 답 784

$28^2=(30-\boxed{2})^2=900-\boxed{120}+\boxed{4}=\boxed{784}$

114 답 2401

$49^2=(50-1)^2=2500-100+1=2401$

115 답 **89401**

$299^2=(300-1)^2=90000-600+1=89401$

116 답 **994009**

$997^2=(1000-3)^2=1000000-6000+9=994009$

117 답 $a^2+2ab+b^2$, $a^2-2ab+b^2$

118 답 **399**

$21\times19=(20+\boxed{1})(20-\boxed{1})=20^2-\boxed{1}^2$

$=\boxed{400}-1=\boxed{399}$

119 답 **896**

$32\times28=(30+2)(30-2)=30^2-2^2=900-4=896$

120 답 **3591**

$63\times57=(60+3)(60-3)=60^2-3^2=3600-9=3591$

121 답 **8099**

$91\times89=(90+1)(90-1)=90^2-1^2$

$=8100-1=8099$

122 답 **9999**

$101\times99=(100+1)(100-1)=100^2-1^2$

$=10000-1=9999$

123 답 **39996**

$202\times198=(200+2)(200-2)=200^2-2^2$

$=40000-4=39996$

124 답 **1023**

$31\times33=(30+\boxed{1})(30+\boxed{3})$

$=30^2+(\boxed{1}+\boxed{3})\times30+\boxed{1}\times\boxed{3}$

$=900+\boxed{120}+\boxed{3}=\boxed{1023}$

125 답 **10710**

$102\times105=(100+2)(100+5)$

$=100^2+(2+5)\times100+2\times5$

$=10000+700+10=10710$

126 답 **812**

$28\times29=(30-2)(30-1)$

$=30^2+\{(-2)+(-1)\}\times30+(-2)\times(-1)$

$=900-90+2=812$

127 답 **2448**

$48\times51=(50-2)(50+1)$

$=50^2+\{(-2)+1\}\times50+(-2)\times1$

$=2500-50-2=2448$

128 답 a^2-b^2, $x^2+(a+b)x+ab$

129 답 $x^2+4xy+4y^2-6x-12y+9$

$x+2y=A$라 하면

(주어진 식)$=(A-3)^2=A^2-\boxed{6}A+9$

$=(x+2y)^2-\boxed{6}(x+2y)+\boxed{9}$

$=x^2+4xy+\boxed{4}y^2-\boxed{6}x-\boxed{12}y+9$

130 답 $9x^2-6xy+y^2+12x-4y+4$

$3x-y=A$라 하면

(주어진 식)$=(A+2)^2=A^2+4A+4$

$=(3x-y)^2+4(3x-y)+4$

$=9x^2-6xy+y^2+12x-4y+4$

131 답 $4x^2+12xy+9y^2+4x+6y+1$

$2x+3y=A$라 하면

(주어진 식)$=(A+1)^2=A^2+2A+1$

$=(2x+3y)^2+2(2x+3y)+1$

$=4x^2+12xy+9y^2+4x+6y+1$

132 답 $a^2-2ab+b^2-a+b-12$

$a-b=A$라 하면

(주어진 식)$=(A+3)(A-4)=A^2-A-12$

$=(a-b)^2-(a-b)-12$

$=a^2-2ab+b^2-a+b-12$

133 답 $x^2-4y^2+12y-9$

$2y-3=A$라 하면

(주어진 식)$=(\boxed{x}+A)(\boxed{x}-A)=\boxed{x}^2-A^2$

$=\boxed{x}^2-(2y-3)^2$

$=\boxed{x}^2-(4y^2-\boxed{12}y+9)$

$=\boxed{x}^2-4y^2+\boxed{12}y-9$

134 답 $a^2-2ac+c^2-b^2$

$a-c=A$라 하면

(주어진 식)$=(A-b)(A+b)=A^2-b^2$

$=(a-c)^2-b^2$

$=a^2-2ac+c^2-b^2$

135 답 $7x+15$

(주어진 식)$=x^2+\boxed{6}x+9-(x^2-x-6)$

$=x^2+\boxed{6}x+9-x^2+x+6$

$=\boxed{7}x+\boxed{15}$

136 답 $2x^2+2x-3$

(주어진 식)$=x^2-4x+4+x^2+6x-7$

$=2x^2+2x-3$

137 답 $16x+1$

(주어진 식)$=x^2+8x+16-(x^2-8x+15)$

$=x^2+8x+16-x^2+8x-15$

$=16x+1$

138 답 $2x^2+x+15$

(주어진 식)$=x^2+7x+6+x^2-6x+9$

$=2x^2+x+15$

139 답 $-13x+1$

(주어진 식)$=x^2-7x+10-(x^2+6x+9)$

$=x^2-7x+10-x^2-6x-9$

$=-13x+1$

140 답 $5x-14$

(주어진 식)$=x^2+2x-24-(x^2-3x-10)$

$=x^2+2x-24-x^2+3x+10$

$=5x-14$

141 답 $12x-3$

(주어진 식)$=x^2+6x+5-(x^2-6x+8)$

$=x^2+6x+5-x^2+6x-8$

$=12x-3$

142 답 $2x^2-8x-4$

(주어진 식)$=x^2-5x+6+x^2-3x-10$

$=2x^2-8x-4$

143 답 $2x-4$

(주어진 식)$=x^2-3x-18-(x^2-5x-14)$

$=x^2-3x-18-x^2+5x+14$

$=2x-4$

144 답 1) 한 문자, 곱셈 2) 동류항

145 답 5

$x^2+y^2=(x+y)^2-\boxed{2}xy=3^2-\boxed{2}\times2$

$=9-\boxed{4}=\boxed{5}$

146 답 1

$(x-y)^2=(x+y)^2-\boxed{4}xy=3^2-\boxed{4}\times2$

$=9-\boxed{8}=\boxed{1}$

147 답 29

$x^2+y^2=(x+y)^2-2xy=7^2-2\times10$

$=49-20=29$

148 답 9

$(x-y)^2=(x+y)^2-4xy=7^2-4\times10$

$=49-40=9$

149 답 11

$x^2+y^2=(x-y)^2+2xy=1^2+2\times5$

$=1+10=11$

150 답 21

$(x+y)^2=(x-y)^2+4xy=1^2+4\times5$

$=1+20=21$

151 답 17

$x^2+y^2=(x-y)^2+2xy$

$=3^2+2\times4=9+8=17$

152 답 25

$(x+y)^2=(x-y)^2+4xy$

$=3^2+4\times4=9+16=25$

153 답 1) $2xy$ 2) $2xy$ 3) $4xy$ 4) $4xy$

Ⅱ－2 다항식의 인수분해 공식 pp. 67~83

154 답 $2a^2+6a$

(주어진 식)$=2a\times\boxed{a}+2a\times\boxed{3}=\boxed{2a^2}+\boxed{6a}$

155 답 $x^2+14x+49$

(주어진 식)$=x^2+2\times x\times7+7^2=x^2+14x+49$

156 답 $4x^2-12x+9$

(주어진 식)$=(2x)^2-2\times2x\times3+3^2$

$=4x^2-12x+9$

157 답 $25x^2-4$

(주어진 식)$=(5x)^2-2^2$

$=25x^2-4$

158 답 $8x^2-42x+27$

(주어진 식)$=2x\times4x+\{2\times(-3)+(-9)\times4\}x$

$+(-9)\times(-3)$

$=8x^2-42x+27$

159 답 $x^2+2xy-8y^2$

(주어진 식)$=x^2+\{x\times(-2y)+4y\times x\}+4y\times(-2y)$

$=x^2+2xy-8y^2$

160 답 $x,\ y,\ x^2,\ xy$

161 답 $x,\ x+y,\ x(x+y)$

162 답 $x,\ y,\ xy,\ x-y$

163 답 $a,\ b,\ ab,\ a+b,\ b(a+b)$

164 답 $a-b,\ a+b$

165 1) 인수 2) 인수분해

166 답 $xy(y-3)$

공통인수가 $\boxed{xy}$이므로 인수분해하면

$xy^2-3xy=\boxed{xy}(y-3)$

167 답 $a^2(1+3a)$

공통인수가 a^2이므로 $a^2+3a^3=a^2(1+3a)$

168 답 $4ab(3a-1)$

공통인수가 $4ab$이므로 $12a^2b-4ab=4ab(3a-1)$

169 답 $a(x-y+z)$

공통인수가 a이므로 $ax-ay+az=a(x-y+z)$

170 답 $3a^2b(1+4ab-2b^2)$

공통인수가 $3a^2b$이므로

$3a^2b+12a^3b^2-6a^2b^3=3a^2b(1+4ab-2b^2)$

171 답 $(x-y)(a+b)$

공통인수가 $\boxed{x-y}$이므로 인수분해하면

$a(x-y)+b(x-y)=(\boxed{x-y})(a+b)$

172 답 $(x+y)(1+7xy)$

공통인수가 $x+y$이므로

$(x+y)+7xy(x+y)=(x+y)(1+7xy)$

173 답 $(a+b)(2-x-2y)$

공통인수가 $a+b$이므로

$2(a+b)-(x+2y)(a+b)=(a+b)(2-x-2y)$

174 답 $3a(x-1)$

공통인수가 $x-1$이므로

$(x-1)(a+b)+(x-1)(2a-b)$

$=(x-1)(a+b+2a-b)=3a(x-1)$

175 답 1) 공통인수 2) 공통, 분배, 공통

176 답 $(x+1)^2$

(주어진 식)$=x^2+2\times\boxed{x}\times\boxed{1}+\boxed{1}^2=(x+\boxed{1})^2$

177 답 $(x+3)^2$

(주어진 식)$=x^2+2\times x\times3+3^2=(x+3)^2$

178 답 $(x+4)^2$

(주어진 식)$=x^2+2\times x\times4+4^2=(x+4)^2$

179 답 $(a+2)^2$

(주어진 식)$=a^2+2\times a\times2+2^2=(a+2)^2$

180 답 $(a+9)^2$

(주어진 식)$=a^2+2\times a\times9+9^2=(a+9)^2$

181 답 $(5+x)^2$

(주어진 식)$=5^2+2\times5\times x+x^2=(5+x)^2$

182 답 $(x-2)^2$

(주어진 식)$=x^2-2\times\boxed{x}\times\boxed{2}+\boxed{2}^2=(x-\boxed{2})^2$

183 답 $(x-5)^2$

(주어진 식)$=x^2-2\times x\times5+5^2=(x-5)^2$

184 답 $(x-7)^2$

(주어진 식)$=x^2-2\times x\times7+7^2=(x-7)^2$

185 답 $(a-11)^2$

(주어진 식)$=a^2-2\times a\times 11+11^2=(a-11)^2$

186 답 $(a-8)^2$

(주어진 식)$=a^2-2\times a\times 8+8^2=(a-8)^2$

187 답 $(10-x)^2$

(주어진 식)$=10^2-2\times 10\times x+x^2=(10-x)^2$

188 답 $(x+6y)^2$

(주어진 식)$=x^2+2\times x\times \boxed{6}y+(\boxed{6y})^2$

$=(x+\boxed{6y})^2$

189 답 $(a+7b)^2$

(주어진 식)$=a^2+2\times a\times 7b+(7b)^2=(a+7b)^2$

190 답 $(3x+1)^2$

(주어진 식)$=(3x)^2+2\times 3x\times 1+1^2=(3x+1)^2$

191 답 $(5x+3y)^2$

(주어진 식)$=(5x)^2+2\times 5x\times 3y+(3y)^2=(5x+3y)^2$

192 답 $\left(x+\frac{1}{2}\right)^2$

(주어진 식)$=x^2+2\times x\times\frac{1}{2}+\left(\frac{1}{2}\right)^2=\left(x+\frac{1}{2}\right)^2$

193 답 $3(x+2)^2$

(주어진 식)$=\boxed{3}(x^2+4x+4)=3(x+\boxed{2})^2$

194 답 $a(3x+1)^2$

(주어진 식)$=a(9x^2+6x+1)=a(3x+1)^2$

195 답 $(x-9y)^2$

(주어진 식)$=x^2-2\times x\times \boxed{9}y+(\boxed{9y})^2=(x-\boxed{9y})^2$

196 답 $(a-12b)^2$

(주어진 식)$=a^2-2\times a\times 12b+(12b)^2=(a-12b)^2$

197 답 $(7x-2)^2$

(주어진 식)$=(7x)^2-2\times 7x\times 2+2^2=(7x-2)^2$

198 답 $(3x-2y)^2$

(주어진 식)$=(3x)^2-2\times 3x\times 2y+(2y)^2=(3x-2y)^2$

199 답 $\left(x-\frac{1}{2}\right)^2$

(주어진 식)$=x^2-2\times x\times\frac{1}{2}+\left(\frac{1}{2}\right)^2=\left(x-\frac{1}{2}\right)^2$

200 답 $2(x-5)^2$

(주어진 식)$=\boxed{2}(x^2-\boxed{10}x+\boxed{25})$

$=\boxed{2}(x-\boxed{5})^2$

201 답 1) $(a+b)^2$ 2) $(a-b)^2$

202 답 16

(주어진 식)$=x^2+2\times x\times 4+\boxed{4}^2$

203 답 $\frac{1}{4}$

(주어진 식)$=x^2+2\times x\times\frac{1}{2}+\left(\frac{1}{2}\right)^2$

204 답 $81y^2$

(주어진 식)$=x^2-2\times x\times 9y+(9y)^2$

205 답 $36b^2$

(주어진 식)$=a^2+2\times a\times 6b+(6b)^2$

206 답 49

(주어진 식)$=(2x)^2+2\times 2x\times 7+7^2$

207 답 $\frac{1}{16}$

(주어진 식)$=(4x)^2-2\times 4x\times\frac{1}{4}+\left(\frac{1}{4}\right)^2$

208 답 10

x의 계수가 양수이므로 $2\times\sqrt{25}=\boxed{10}$

209 답 12

x의 계수가 양수이므로 $2\times\sqrt{36}=12$

210 답 6

x의 계수가 양수이므로 $2\times\sqrt{9}=6$

211 답 30

x의 계수가 양수이므로 $2\times\sqrt{9}\times\sqrt{25}=30$

212 답 1) $\left(\frac{a}{2}\right)^2$ 2) $\pm 2\sqrt{b}$

213 답 $(x+3)(x-3)$

(주어진 식)$=x^2-\boxed{3}^2=(x+\boxed{3})(x-\boxed{3})$

214 답 $(a+4)(a-4)$

(주어진 식)$=a^2-4^2=(a+4)(a-4)$

215 답 $(x+7y)(x-7y)$

(주어진 식)$=x^2-(7y)^2=(x+7y)(x-7y)$

216 답 $\left(x+\frac{3}{2}y\right)\left(x-\frac{3}{2}y\right)$

(주어진 식)$=x^2-\left(\frac{3}{2}y\right)^2=\left(x+\frac{3}{2}y\right)\left(x-\frac{3}{2}y\right)$

217 답 $(5x+9y)(5x-9y)$

(주어진 식)$=(5x)^2-(9y)^2=(5x+9y)(5x-9y)$

218 답 $5(a+3)(a-3)$

(주어진 식)$=\boxed{5}(a^2-9)$

$=\boxed{5}(a+\boxed{3})(a-\boxed{3})$

219 답 $\frac{1}{2}\left(a+\frac{1}{2}\right)\left(a-\frac{1}{2}\right)$

(주어진 식)$=\frac{1}{2}\left(a^2-\frac{1}{4}\right)=\frac{1}{2}\left(a+\frac{1}{2}\right)\left(a-\frac{1}{2}\right)$

220 답 $a(a+1)(a-1)$

(주어진 식)$=\boxed{a}(a^2-\boxed{1})$

$=\boxed{a}(a+\boxed{1})(a-\boxed{1})$

221 답 $b(a+b)(a-b)$

(주어진 식)$=b(a^2-b^2)$

$=b(a+b)(a-b)$

222 답 합, 차, $(a+b)(a-b)$

223 답 2, 4

곱이 8인 두 정수 a, b에 대하여 순서쌍 (a, b)로 나타내면 $(1, \boxed{8})$, $(2, \boxed{4})$, $(-1, \boxed{-8})$, $(-2, \boxed{-4})$이고, 이 중 합이 6인 두 정수는 작은 순서대로 $\boxed{2}$, $\boxed{4}$이다.

224 답 -7, 4

곱이 -28인 두 정수 a, b에 대하여 순서쌍 (a, b)로 나타내면 $(1, -28)$, $(2, -14)$, $(4, -7)$, $(7, -4)$, $(14, -2)$, $(28, -1)$이고, 이 중 합이 -3인 두 정수는 작은 순서대로 -7, 4이다.

225 답 -5, -3

곱이 15인 두 정수 a, b에 대하여 순서쌍 (a, b)로 나타내면 $(1, 15)$, $(3, 5)$, $(-1, -15)$, $(-3, -5)$이고, 이 중 합이 -8인 두 정수는 작은 순서대로 -5, -3이다.

226 답 -2, 8

곱이 -16인 두 정수 a, b에 대하여 순서쌍 (a, b)로 나타내면 $(1, -16)$, $(2, -8)$, $(4, -4)$, $(8, -2)$, $(16, -1)$이고, 이 중 합이 6인 두 정수는 작은 순서대로 -2, 8이다.

227 답 4, 6

곱이 24인 두 정수 a, b에 대하여 순서쌍 (a, b)로 나타내면 $(1, 24)$, $(2, 12)$, $(3, 8)$, $(4, 6)$, $\cdots$, $(-1, -24)$이고, 이 중 합이 10인 두 정수는 작은 순서대로 4, 6이다.

228 답 $(x+1)(x+2)$

곱이 $\boxed{2}$이고, 합이 $\boxed{3}$인 두 정수는 작은 순서대로 $\boxed{1}$, $\boxed{2}$이므로

$x^2+3x+2=(x+\boxed{1})(x+\boxed{2})$

229 답 $(x+1)(x+3)$

곱이 3이고 합이 4인 두 정수는 1, 3이므로

$x^2+4x+3=(x+1)(x+3)$

230 답 $(x+3)(x+6)$

곱이 18이고 합이 9인 두 정수는 3, 6이므로

$x^2+9x+18=(x+3)(x+6)$

231 답 $3a(x+2)(x-6)$

(주어진 식)$=3a(x^2-4x-12)=3a(x+2)(x-6)$

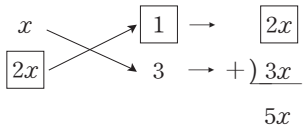
232 답 $2y(x-7)(x+10)$

(주어진 식)$=2y(x^2+3x-70)$

$=2y(x-7)(x+10)$

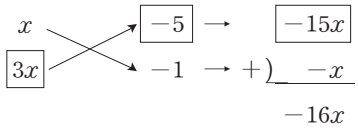
233 답 1) 상수 2) a, b 3) $(x+a)(x+b)$

234 답 $(x+1)(2x+3)$



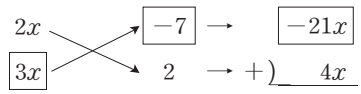
$=(x+\boxed{1})(\boxed{2x}+3)$

235 답 $(x-5)(3x-1)$



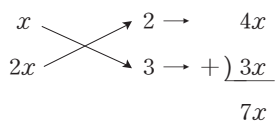
$=(x-\boxed{5})(\boxed{3x}-1)$

236 답 $(2x-7)(3x+2)$

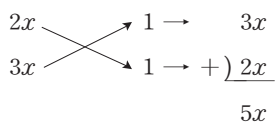


$=(2x-\boxed{7})(\boxed{3x}+2)$

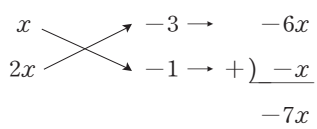
237 답 $(x+2)(2x+3)$



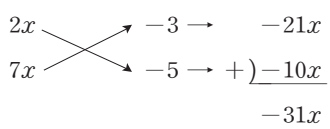
238 답 $(2x+1)(3x+1)$



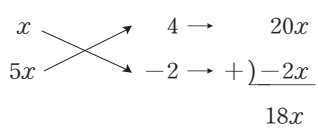
239 답 $(x-3)(2x-1)$



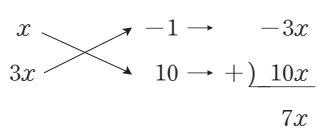
240 답 $(2x-3)(7x-5)$



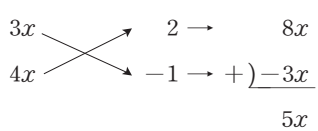
241 답 $(x+4)(5x-2)$



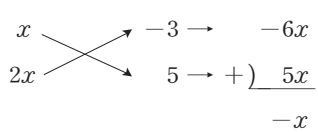
242 답 $(x-1)(3x+10)$



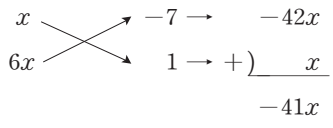
243 답 $(3x+2)(4x-1)$



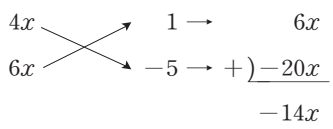
244 답 $(x-3)(2x+5)$



245 답 $(x-7)(6x+1)$



246 답 $(4x+1)(6x-5)$



247 답 $2(x+1)(3x+1)$

(주어진 식)$=\boxed{2}(3x^2+\boxed{4}x+\boxed{1})$

$=\boxed{2}(x+\boxed{1})(3x+\boxed{1})$

248 답 $3(2x+3)(3x-2)$

(주어진 식)$=3(6x^2+5x-6)=3(2x+3)(3x-2)$

249 답 $-(x-1)(4x-3)$

(주어진 식)$=-(4x^2-7x+3)=-(x-1)(4x-3)$

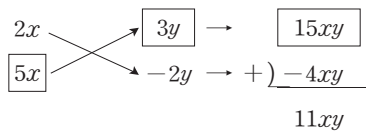
250 답 $2a(x-4)(2x+3)$

(주어진 식)$=2a(2x^2-5x-12)$

$=2a(x-4)(2x+3)$

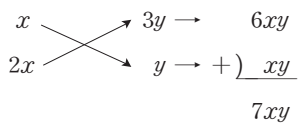
251 답 1) a, c, ax, cx 2) b, d 3) x 4) $(ax+b)(cx+d)$

252 답 $(2x+3y)(5x-2y)$



$=(2x+\boxed{3y})(\boxed{5x}-2y)$

253 답 $(x+3y)(2x+y)$



254 답 $(x+y)(x-4y)$

곱이 -4이고 합이 -3인 두 수는 1, -4이므로

$x^2-3xy-4y^2=(x+y)(x-4y)$

255 답 $(x+2y)(x-3y)$

곱이 -6이고 합이 -1인 두 수는 2, -3이므로

$x^2-xy-6y^2=(x+2y)(x-3y)$

256 답 $(x-3y)(x+5y)$

곱이 -15이고 합이 2인 두 수는 -3, 5이므로

$x^2+2xy-15y^2=(x-3y)(x+5y)$

257 답 $3(x+y)(x+4y)$

(주어진 식)$=3(x^2+\boxed{5}xy+\boxed{4}y^2)$

$=3(x+\boxed{1}y)(x+\boxed{4}y)$

258 답 $2(x-3y)(x+5y)$

(주어진 식)$=2(x^2+2xy-15y^2)=2(x-3y)(x+5y)$

259 답 $-(x-2y)(x-6y)$

(주어진 식)$=-(x^2-8xy+12y^2)=-(x-2y)(x-6y)$

260 답 $-3(x-y)(x+6y)$

(주어진 식)$=-3(x^2+5xy-6y^2)$

$=-3(x-y)(x+6y)$

261 답 $2y(x-y)(4x-9y)$

(주어진 식)$=2y(4x^2-13xy+9y^2)$

$=2y(x-y)(4x-9y)$

262 답 1) y^2 2) a, b 3) $(x+ay)(x+by)$

263 답 $(x-1)(y+1)$

(주어진 식)$=x(y+\boxed{1})-(y+\boxed{1})$

$=(x-\boxed{1})(y+\boxed{1})$

264 답 $(x+1)(y+1)$

(주어진 식)$=y(x+1)+(x+1)$

$=(x+1)(y+1)$

265 답 $(x-2)(y-1)$

(주어진 식)$=x(y-1)-2(y-1)=(x-2)(y-1)$

266 답 $(x-1)(y-z)$

(주어진 식)$=x(y-z)-(y-z)=(x-1)(y-z)$

267 답 $(a-3)(b-1)$

(주어진 식)$=b(a-3)-(a-3)=(a-3)(b-1)$

268 답 $(a-1)(a-b)$

(주어진 식)$=a(a-b)-(a-b)=(a-1)(a-b)$

269 답 $(x+y+2)(x-y+2)$

(주어진 식)$=(\boxed{x+2}+y)(x+2-\boxed{y})$

$=(\boxed{x}+\boxed{y}+2)(\boxed{x}-\boxed{y}+2)$

270 답 $(x+2y-1)(x-2y+1)$

(주어진 식)$=(x+2y-1)\{x-(2y-1)\}$

$=(x+2y-1)(x-2y+1)$

271 답 $(x+y+5)(x-y-1)$

(주어진 식)$=(x+2+y+3)\{x+2-(y+3)\}$

$=(x+y+5)(x-y-1)$

272 답 $8y(x-y)$

(주어진 식)$=(x+y+x-3y)\{x+y-(x-3y)\}$

$=(2x-2y)4y=8y(x-y)$

273 답 $4y(x+2y)(x-2y)$

(주어진 식)$=4y(x^2-4y^2)=4y(x+2y)(x-2y)$

274 답 $(a^2+b^2)(a+b)(a-b)$

(주어진 식)$=(a^2)^2-(b^2)^2=(a^2+b^2)(a^2-b^2)$

$=(a^2+b^2)(a+b)(a-b)$

275 답 $(x+y-5)(x-y-5)$

(주어진 식)$=(x^2-10x+25)-y^2$

$=(x-\boxed{5})^2-y^2$

$=(x-\boxed{5}+y)(x-\boxed{5}-y)$

$=(x+y-\boxed{5})(x-y-\boxed{5})$

276 답 $(x+y+1)(x-y+1)$

(주어진 식)$=x^2+2x+1-y^2=(x+1)^2-y^2$

$=(x+1+y)(x+1-y)$

$=(x+y+1)(x-y+1)$

277 답 $(a-b+c)(a-b-c)$

(주어진 식)$=a^2-2ab+b^2-c^2=(a-b)^2-c^2$

$=(a-b+c)(a-b-c)$

278 답 $(x+y-3z)(x-y+3z)$

(주어진 식)$=x^2-(y^2-6yz+9z^2)=x^2-(y-3z)^2$

$=(x+y-3z)(x-y+3z)$

279 답 $-(x+y+2)(x+y-2)$

(주어진 식)$=4-(x^2+2xy+y^2)$

$=2^2-(x+y)^2=-\{(x+y)^2-2^2\}$

$=-(x+y+2)(x+y-2)$

280 답 $-(x+y+3)(x-y+3)$

(주어진 식) $=-(x^2+6x+9)+y^2$

$=-(x+3)^2+y^2=-\{(x+3)^2-y^2\}$

$=-(x+3+y)(x+3-y)$

$=-(x+y+3)(x-y+3)$

281 답 $(x-2)(x+y-2)$

(주어진 식) $=x^2-4x+4+xy-2y$

$=(x-\boxed{2})^2+y(x-\boxed{2})$

$=(x-\boxed{2})(x-\boxed{2}+y)$

$=(x-\boxed{2})(x+y-\boxed{2})$

282 답 $(x+2)(x-y-3)$

(주어진 식) $=x^2-x-6-xy-2y$

$=(x+\boxed{2})(x-\boxed{3})-\boxed{y}(x+2)$

$=(x+\boxed{2})(x-\boxed{3}-\boxed{y})$

$=(x+\boxed{2})(x-\boxed{y}-\boxed{3})$

283 답 $(a-b)(a-b+2c)$

(주어진 식) $=a^2-2ab+b^2+2ac-2bc$

$=(a-\boxed{b})^2+\boxed{2c}(a-\boxed{b})$

$=(a-\boxed{b})(a-\boxed{b}+\boxed{2c})$

284 답 1) 공통, 공통 2) 적당한 3) 내림차순

285 답 $(a+b+2)^2$

$a+b=A$라 하면

(주어진 식) $=A^2+4A+4=(A+\boxed{2})^2$

$=(a+b+\boxed{2})^2$

286 답 $(x-y+7)^2$

$x-y=A$라 하면

(주어진 식) $=A^2+14A+49=(A+7)^2$

$=(x-y+7)^2$

287 답 $(a+2b-3)^2$

$a+2b=A$라 하면

(주어진 식) $=A^2-6A+9=(A-3)^2$

$=(a+2b-3)^2$

288 답 $(2x-y-4)^2$

$2x-y=A$라 하면

(주어진 식) $=A^2-8A+16=(A-4)^2$

$=(2x-y-4)^2$

289 답 $(2x+3y-1)(2x+3y-5)$

$2x+3y=A$라 하면

(주어진 식) $=A^2-6A+5=(A-1)(A-5)$

$=(2x+3y-1)(2x+3y-5)$

290 답 $(x-z+1)(x-z+2)$

$x-z=A$라 하면

(주어진 식) $=A(A+\boxed{3})+2=A^2+\boxed{3}A+2$

$=(A+\boxed{1})(A+\boxed{2})$

$=(x-z+\boxed{1})(x-z+\boxed{2})$

291 답 $(x+y-3)(x+y+4)$

$x+y=A$라 하면

(주어진 식) $=A(A+1)-12=A^2+A-12$

$=(A-3)(A+4)$

$=(x+y-3)(x+y+4)$

292 답 치환

293 답 1700

(주어진 식) $=17\times(58+\boxed{42})=17\times\boxed{100}=\boxed{1700}$

294 답 78900

(주어진 식) $=789\times(24+76)=789\times100=78900$

295 답 640

(주어진 식) $=64\times(72-62)=64\times10=640$

296 답 214

(주어진 식) $=107\times(47-45)=107\times2=214$

297 답 180

(주어진 식) $=12\times(7+3+5)=12\times15=180$

298 답 56

(주어진 식) $=28\times(4-6+4)=28\times2=56$

299 답 10000

(주어진 식) $=(94+\boxed{6})^2=\boxed{100}^2=\boxed{10000}$

300 답 40000

(주어진 식) $=195^2+2\times195\times5+5^2$

$=(195+5)^2=200^2=40000$

301 답 **3600**

(주어진 식)$=56^2+2\times56\times4+4^2$

$=(56+4)^2=60^2=3600$

302 답 **2500**

(주어진 식)$=(53-3)^2=50^2=2500$

303 답 **10000**

(주어진 식)$=102^2-2\times102\times2+2^2$

$=(102-2)^2=100^2=10000$

304 답 **4900**

(주어진 식)$=78^2-2\times78\times8+8^2$

$=(78-8)^2=70^2=4900$

305 답 **199**

(주어진 식)$=(100+\boxed{99})(100-\boxed{99})$

$=\boxed{199}\times1=\boxed{199}$

306 답 **1200**

(주어진 식)$=(152+148)(152-148)$

$=300\times4=1200$

307 답 **9400**

(주어진 식)$=97^2-3^2=(97+3)(97-3)$

$=100\times94=9400$

308 답 **30**

(주어진 식)$=\sqrt{(50+40)(50-40)}=\sqrt{90\times10}$

$=\sqrt{900}=\sqrt{30^2}=30$

309 답 **$10\sqrt{2}$**

(주어진 식)$=\sqrt{(51+49)(51-49)}=\sqrt{100\times2}$

$=\sqrt{200}=10\sqrt{2}$

310 답 **30**

(주어진 식)$=\sqrt{(54.5+45.5)(54.5-45.5)}$

$=\sqrt{100\times9}=\sqrt{900}=30$

311 답 **14000**

(주어진 식)$=\boxed{14}\times(55^2-45^2)$

$=\boxed{14}\times(55+\boxed{45})(55-\boxed{45})$

$=14\times\boxed{100}\times\boxed{10}$

$=\boxed{14000}$

312 답 **10000**

(주어진 식)$=2.5\times(70^2-30^2)$

$=2.5\times(70+30)(70-30)$

$=2.5\times100\times40=10000$

313 답 **336**

(주어진 식)$=4.8\times(8.5^2-1.5^2)$

$=4.8\times(8.5+1.5)(8.5-1.5)$

$=4.8\times10\times7=336$

314 답 **34**

(주어진 식)$=(10^2-9^2)+(8^2-7^2)$

$=(10+9)(10-9)+(8+7)(8-7)$

$=19+15=34$

315 답 **10000**

$x^2+4x+4=(x+\boxed{2})^2$

$=(98+\boxed{2})^2$

$=\boxed{10000}$

316 답 **10000**

(주어진 식)$=(x-3)^2=(103-3)^2$

$=100^2=10000$

317 답 **180**

(주어진 식)$=(x+2)(x-6)=(16+2)(16-6)$

$=18\times10=180$

318 답 **$2\sqrt{5}$**

(주어진 식)$=\sqrt{(x+1)^2}+\sqrt{(x-1)^2}$

$=\sqrt{(\sqrt{5}+1)^2}+\sqrt{(\sqrt{5}-1)^2}$

$=(\sqrt{5}+1)+(\sqrt{5}-1)=2\sqrt{5}$

319 답 **2**

(주어진 식)$=\{(x+4)-2\}^2$

$=(x+2)^2$

$=(\sqrt{2}-2+2)^2$

$=(\sqrt{2})^2=2$

320 답 **100**

$x^2+2xy+y^2=(x+y)^2=(7.4+\boxed{2.6})^2=\boxed{100}$

321 답 **12**

(주어진 식)$=(x+y)^2=(\sqrt{3}+\sqrt{2}+\sqrt{3}-\sqrt{2})^2$

$=(2\sqrt{3})^2=12$

322 답 $8\sqrt{7}$

(주어진 식)$=(x+y)(x-y)$

$=(2+\sqrt{7}+2-\sqrt{7})(2+\sqrt{7}-2+\sqrt{7})$

$=4\times2\sqrt{7}=8\sqrt{7}$

323 답 32

(주어진 식)$=x(y-4)+4(y-4)$

$=(x+4)(y-4)$

$=(4+4)(8-4)=32$

324 답 1) 인수분해 2) 인수분해 3) 양수, 음수, 근호

325 답 x^2-x-20

선미가 잘못 본 식 : $(x+4)(x-5)=x^2-x-20$

326 답 x^2+x-12

규한이가 잘못 본 식 : $(x+4)(x-3)=x^2+x-12$

327 답 x^2+x-20

이차항의 계수가 1인 이차방정식 x^2-x-20에서 선미는 x의 계수를 잘못 보았으므로 상수항 -20은 제대로 보았다.

x^2+x-12에서 규한이는 상수항을 잘못 보았으므로 x항 $+x$는 제대로 보았다.

$\therefore x^2+x-20$

328 답 $(x+5)(x-4)$

$x^2+x-20=(x+5)(x-4)$

329 답 -9

$x^2-ax+18=(x-3)(x-\boxed{6})$이므로

$(x-3)(x-\boxed{6})=x^2-\boxed{9}x+18$

$\therefore a=\boxed{-9}$

330 답 13

$2x^2+ax-24=(x+8)(2x-\boxed{3})$이므로

$(x+8)(2x-\boxed{3})=2x^2+\boxed{13}x-24$

$\therefore a=\boxed{13}$

331 답 1) ① x^2의 계수, 상수항 ② x^2의 계수, x의 계수

2) $(x+1)$

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단원 총정리 문제 정답 Ⅱ 식의 계산

01 -5	02 ④	03 ②	04 -12	05 ②
06 ②	07 ①	08 ③	09 ⑤	10 ④
11 ③, ④	12 ②	13 ③	14 ①, ④	15 ③
16 $x-4$				

01 답 -5

(주어진 식)$=2x^2+xy-6xy-3y^2=2x^2-5xy-3y^2$

따라서 xy의 계수는 -5이다.

02 답 ④

$(x-3y)^2=(-1)^2\times(x-3y)^2$

$=\{-(x-3y)\}^2$

$=(-x+3y)^2$

03 답 ②

$(a+b)(a-b)=a^2-b^2=(-a)^2-b^2$

$=(-a+b)(-a-b)$

04 답 -12

$(x-3)(x+A)=x^2+(A-3)x-3A$

$A-3=3 \quad \therefore A=6$

$\therefore B=-3A=-18 \quad \therefore A+B=-12$

05 답 ②

(주어진 식)$=(2\times5)x^2+\{2\times(-2)+(-1)\times5\}x$

$+(-1)\times(-2)$

$=10x^2-9x+2$

06 답 ②

② $103\times97=(100+3)(100-3)=100^2-3^2$

$=10000-9=9991$

07 답 ①

(주어진 식)$=x^2-2x+1-(x^2+8x+16)$

$=x^2-2x+1-x^2-8x-16=-10x-15$

따라서 x의 계수는 -10이다.

08 답 ③

$(a-b)^2=a^2-2ab+b^2$이므로

$(-2)^2=6-2ab$, $2ab=6-4=2$

$\therefore ab=1$