

FACTORING

1. GCF

2. GROUPING (4 OR MORE TERMS)

3. P-S-D (Form: $x^2 + bx + c$)

4. KEY # (Form: $ax^2 + bx + c$)

5. DOTS (2 TERMS WITH A MINUS BETWEEN THEM)

① $4x^2 + 17x + 4$

$ac = 4(4) = 16$

$4x^2 + 16x + 1x + 4$

P	S	D
1.16	(17)	15
2.8	10	6
4.4	8	0

$4x(x+4) + 1(x+4)$

$(x+4)(4x+1)$

② $5x^2 + 17x - 12$
 $5x^2 + 20x - 3x - 12$
 $5x(x+4) - 3(x+4)$
 $(x+4)(5x-3)$

$ac = 5(12) = 60$

P	S	D
1.60	61	59
2.30	32	28
3.20	23	(17)
4.15	19	11
5.12	17	7
6.10	16	4

③ $4 - 33x + 8x^2$

$ac = 8(4) = 32$

$8x^2 - 33x + 4$

$8x^2 - 32x - 1x + 4$

P	S	D
1.32	(33)	31
2.16	18	14
4.8	12	4

$8x(x-4) - 1(x-4)$

$(x-4)(8x-1)$

④ $8x^2 - 34xy - 30y^2$
 $2(4x^2 - 17xy - 15y^2)$
 $2(4x^2 - 20xy + 3xy - 15y^2)$
 $2[4x(x-5y) + 3y(x-5y)]$
 $2(x-5y)(4x+3y)$

$ac = 4(15) = 60$

P	S	D
1.60	61	59
2.30	32	28
3.20	23	(17)
4.15	19	11
5.12	17	7
6.10	16	4

⑤ $30p^2 - 23p + 3$

$ac = 30(3) = 90$

$30p^2 - 18p - 5p + 3$

$6p(5p-3) - 1(5p-3)$

$(5p-3)(6p-1)$

P	S	D
1.90	91	89
2.45	47	43
3.30	33	27
5.18	(23)	13
6.15	21	9
9.10	19	1