

Factoring Patterns 6 Key

Factor.

<p>1) $2a^2 + 7a + 6$ $(2x + 3)(a + 2)$</p> <p>2) $2a^2 - 7a + 6$ $(2a - 3)(a - 2)$</p> <p>3) $2a^2 - a - 6$ $(2a + 3)(a - 2)$</p> <p>4) $2a^2 + a - 6$ $(2a - 3)(a + 2)$</p>	<p>5) $2a^2 + 13a + 6$ $(2a + 1)(a + 6)$</p> <p>6) $2a^2 - 13a + 6$ $(2a - 1)(a - 6)$</p> <p>7) $2a^2 + 11a - 6$ $(2a - 1)(a + 6)$</p> <p>8) $2a^2 - 11a - 6$ $(2a + 1)(a - 6)$</p>	<p>10) $3a^2 + 11a + 6$ $(3a + 2)(a + 3)$</p> <p>11) $3a^2 - 11a + 6$ $(3a - 2)(a - 3)$</p> <p>12) $3a^2 + 7a - 6$ $(3a - 2)(a + 3)$</p> <p>13) $3a^2 - 7a - 6$ $(3a + 2)(a - 3)$</p>	<p>14) $3a^2 + 19a + 6$ $(3a + 1)(a + 6)$</p> <p>15) $3a^2 - 19a + 6$ $(3a - 1)(a - 6)$</p> <p>16) $3a^2 + 17a - 6$ $(3a - 1)(a + 6)$</p> <p>17) $3a^2 + 17a - 6$ $(3a - 1)(a + 6)$</p>
<p>9) Give all factor pairs of a trinomial of the form $3a^2 + ? a + 7$. (Don't worry about the signs).</p> <p>(3a and 7)(a and 1); (3a and 1)(a and 7)</p>		<p>18) Give all factor pairs of a trinomial of the form $2a^2 + ? a + 5$. (Don't worry about the signs).</p> <p>(2a and 5)(a and 1); (2a and 1)(a and 5)</p>	
<p>19) $3v^2 + 10v + 8$ $(3v + 4)(v + 2)$</p> <p>20) $3v^2 - 10v + 8$ $(3v - 4)(v - 2)$</p> <p>21) $3v^2 + 2v - 8$ $(3v - 4)(v + 2)$</p> <p>22) $3v^2 - 2v - 8$ $(3v + 4)(v - 2)$</p>	<p>23) $3v^2 + 14v + 8$ $(3v + 2)(v + 4)$</p> <p>24) $3v^2 + 10v - 8$ $(3v - 2)(v + 4)$</p> <p>25) $3v^2 - 14v + 8$ $(3v - 2)(v - 4)$</p> <p>26) $3v^2 - 10v - 8$ $(3v + 2)(v - 4)$</p>	<p>28) $3v^2 + 23v - 8$ $(3v - 1)(v + 8)$</p> <p>29) $3v^2 + 25v + 8$ $(3v + 1)(v + 8)$</p> <p>30) $3v^2 - 23v - 8$ $(3v + 1)(v - 8)$</p> <p>31) $3v^2 - 25v + 8$ $(3v - 1)(v - 8)$</p>	<p>33) $3v^2 + 5v - 8$ $(3v + 8)(v - 1)$</p> <p>34) $3v^2 - 5v - 8$ $(3v - 8)(v + 1)$</p> <p>35) $3v^2 + 11v + 8$ $(3v + 8)(v + 1)$</p> <p>36) $3v^2 - 11v + 8$ $(3v - 8)(v - 1)$</p>
<p>27) Give all factor pairs of a trinomial of the form $5v^2 + ? v + 6$. (Don't worry about the signs).</p> <p>(5v and 6)(v and 1); (5v and 1)(v and 6)</p>		<p>37) Give all factor pairs of a trinomial of the form $7v^2 + ? v + 12$. (Don't worry about the signs).</p> <p>(7v and 12)(v and 1); (7v and 1)(v and 12)</p> <p>(7v and 4)(v and 3); (7v and 3)(v and 4)</p>	

38) $4x^2 + 12x + 5$ $(2x + 1)(2x + 5)$	41) $4x^2 - 12x + 5$ $(2x - 1)(2x - 5)$	45) $4x^2 - 8x - 5$ $(2x + 1)(2x - 5)$	48) $4x^2 + 8x - 5$
36) $4x^2 + 21x + 5$ $(4x + 1)(x + 5)$	42) $4x^2 - 21x + 5$ $(4x - 1)(x - 5)$	46) $4x^2 + 19x - 5$ $(4x - 1)(x + 5)$	49) $4x^2 - 19x - 5$ $(4x + 1)(x - 5)$
40) $4x^2 + 9x + 5$	43) $4x^2 - 9x + 5$ $(4x - 5)(x - 1)$	47) $4x^2 + x - 5$	50) $4x^2 - x - 5$ $(4x - 5)(x + 1)$
44) Give all factor pairs of a trinomial of the form $6x^2 + ?x + 5$. (Don't worry about the signs).	51) Give all factor pairs of a trinomial of the form $10x^2 + ?x + 3$. (Don't worry about the signs).		
(6x and 5)(x and 1); (6x and 1)(x and 5)	(3x and 5)(2x and 1); (3x and 1)(2x and 5)	(10x and 3)(x and 1); (10x and 1)(x and 3)	(5x and 3)(2x and 1); (5x and 1)(2x and 3)
52) $4c^2 + 16c + 15$ $(2c + 3)(2c + 5)$	58) $4c^2 - 16c + 15$ $(2c - 3)(2c - 5)$	65) $4c^2 + 23c + 15$ $(4c + 3)(c + 5)$	71) $4c^2 - 4c - 15$ $(2c + 3)(2c - 5)$
53) $4c^2 + 17c + 15$	59) $4c^2 - 17c + 15$ $(4c - 5)(c - 3)$	66) $4c^2 + 4c - 15$ $(2c - 3)(2c + 5)$	72) $4c^2 - 23c + 15$ $(4c - 3)(c - 5)$
54) $4c^2 - 17c - 15$ $(4c + 3)(c - 5)$	60) $4c^2 + 17c - 15$ $(4c - 3)(c + 5)$	67) $4c^2 - 59c - 15$ $(4c + 1)(c - 15)$	73) $4c^2 - 19c + 15$ $(4c - 15)(c - 1)$
55) $4c^2 - 32c + 15$ $(2c - 3)(2c - 5)$	61) $4c^2 + 32c + 15$	68) $4c^2 + 19c + 15$	74) $4c^2 + 59c - 15$
56) $4c^2 + 11c - 15$ $(4c + 15)(c - 1)$	62) $4c^2 - 11c - 15$ $(4c - 15)(c + 1)$	69) $4c^2 + 28c - 15$ $(2c - 1)(2c + 15)$	75) $4c^2 - 7c - 15$ $(4c + 5)(c - 3)$
57) $4c^2 + 61c + 15$	63) $4c^2 - 61c + 15$	70) $4c^2 + 7c - 15$	76) $4c^2 - 28c - 15$
64) Give all factor pairs of a trinomial of the form $6c^2 + ?c + 10$. (Don't worry about the signs).	77) Give all factor pairs of a trinomial of the form $15c^2 + ?c + 4$. (Don't worry about the signs).		
(6c and 10)(c and 1); (6c and 1)(c and 10)	(6c and 5)(c and 2); (6c and 2)(c and 5)	(15c and 4)(c and 1); (15c and 1)(c and 4)	(15c and 2)(c and 2); (15c and 2)(c and 2)- Same
(3c and 10)(2c and 1); (3c and 1)(2c and 10)	(3c and 5)(2c and 2); (3c and 2)(2c and 5)	(5c and 4)(3c and 1); (5c and 1)(3c and 4)	(5c and 2)(3c and 2); (5c and 2)(3c and 2)- Same

78) $5k^2 + 17k + 6$	82) $5k^2 + 13k + 6$ $(5k + 3)(k + 2)$	87) $5k^2 + 31k + 6$	91) $5k^2 + 11k + 6$ $(5k + 6)(k + 1)$
79) $5k^2 - 13k + 6$ $(5k - 3)(k - 2)$	83) $5k^2 - 31k + 6$ $(5k - 1)(k - 6)$	88) $5k^2 - 11k + 6$ $(5k - 6)(k - 1)$	92) $5k^2 - 13k - 6$
80) $5k^2 + 29k - 6$ $(5k - 1)(k + 6)$	84) $5k^2 + k - 6$ $(5k + 6)(k - 1)$	89) $5k^2 + 13k - 6$ $(5k - 2)(k + 3)$	93) $5k^2 + 7k - 6$ $(5k - 3)(k + 2)$
81) $5k^2 - k - 6$	85) $5k^2 - 17k + 6$ $(5k - 2)(k - 3)$	90) $5k^2 - 7k - 6$	94) $5k^2 - 29k - 6$ $(5k + 1)(k - 6)$
86) Give all factor pairs of a trinomial of the form $4k^2 + ?k + 9$. (Don't worry about the signs).		95) Give all factor pairs of a trinomial of the form $8k^2 + ?k + 6$. (Don't worry about the signs).	
(4k and 9)(k and 1); (4k and 1)(k and 9)	(4k and 3)(k and 3); (4k and 3)(k and 3)-Same	(8k and 6)(k and 1); (8k and 1)(k and 6)	(8k and 3)(k and 2); (8k and 2)(k and 3)
(2k and 9)(2k and 1); (2k and 1)(2k and 9) -Same	(2k and 3)(2k and 3); (2k and 3)(2k and 3) -Same	(4k and 6)(k and 1); (4k and 1)(k and 6)	(4k and 3)(k and 2); (4k and 2)(k and 3)
96) $2a^2 - 13a - 7$ $(2a + 1)(a - 7)$	101) $3x^2 - 6x + 3$ $(3x - 3)(x - 1)$	107) $3z^2 + 16z + 5$ $(3z + 1)(z + 5)$	112) $5b^2 + 3b - 2$ $(5b - 2)(b + 1)$
97) $3v^2 + 11v + 10$ $(3v + 5)(v + 2)$	102) $6v^2 + 11v - 2$ $(6v - 1)(v + 2)$	108) $9c^2 - 16$ $(3c - 4)(3c + 4)$	113) $6a^2 + 5a - 6$ $(2a + 3)(3a - 2)$
98) $6v^2 + 15v - 21$ $3(2v + 7)(v - 1)$	103) $18k^2 - 18k + 4$ $2(3k - 2)(3k - 1)$	109) $12c^2 - 6c - 60$ $6(2c - 5)(c + 2)$	114) $5a^2 + 12a + 4$ $(5a + 2)(a + 2)$
99) $5k^2 + 19k + 12$ $(5k + 4)(k + 3)$	104) $4k^2 - 12k + 9$ $(2k - 3)(2k - 3)$	110) $24a^2 + 42a + 9$ $3(4a + 1)(2a + 3)$	115) $3v^2 - 7v + 4$ $(3v - 4)(v - 1)$
100) $16m^2 - 25$ $(4m - 5)(4m + 5)$	105) $4x^2 + 4x$ $4x(x + 1)$	111) $6h^2 - 12h$ $6h(h - 2)$	116) $25d^2 + 10d + 1$ $(5d + 1)^2$
106) Give all factor pairs of a trinomial of the form $3x^2 + ?x + 8$. (Don't worry about the signs).		117) Give all factor pairs of a trinomial of the form $5x^2 + ?x + 12$. (Don't worry about the signs).	
(3x and 8)(x and 1); (3x and 1)(x and 8)	(3x and 4)(2x and 2); (3x and 2)(2x and 4)	(5x and 12)(x and 1); (5x and 1)(x and 12)	(5x and 6)(x and 2); (5x and 2)(x and 6)
		(5x and 4)(x and 3); (5x and 3)(x and 4)	

118) $6w^2 + 27w$ $3w(2w + 9)$	123) $5x^2 - 34x - 7$ $(5x + 1)(x - 7)$	129) $2v^2 + 13v + 11$ $(2v + 11)(v + 1)$	134) $35m^2 - 21m$ $7m(5m - 3)$
119) $10t^2 + 15t + 10$ $5(2t + 1)(t + 2)$	124) $12m^2 + 8m - 32$ $4(3m - 4)(m + 2)$	130) $5d^2 - 19d + 12$ $(5d - 4)(d - 3)$	135) $9t^2 + 24t + 16$ $(3t + 4)(3t + 4)$
120) $7t^2 + 17t + 6$ $(7t + 3)(t + 2)$	125) $4n^2 - 1$ $(2n + 1)(2n - 1)$	131) $4d^2 + 7d - 36$ $(4d - 9)(d + 4)$	136) $6b^2 + 29b + 20$ $(6b + 5)(b + 4)$
121) $8m^2 + 24m + 18$ $2(2m + 3)(2m + 3)$	126) $8n^2 - 13n - 6$ $(8n + 3)(n - 2)$	132) $27t^2 - 75$ $3(3t - 5)(3t + 5)$	137) $6v^2 + 34v + 48$ $2(3v + 8)(v + 3)$
122) $3n^2 - 4n - 15$ $(3n + 5)(n - 3)$	127) $49x^2 - 28x + 4$ $(7x - 2)^2$	133) $3x^2 - 10x + 7$ $(3x - 7)(x - 1)$	138) $9x^2 + 30x + 25$ $(3x + 5)^2$
128) Give all factor pairs of a trinomial of the form $6m^2 + ?m + 21$. (Don't worry about the signs).		123) Give all factor pairs of a trinomial of the form $8m^2 + ?m + 18$. (Don't worry about the signs).	
(6m and 21)(m and 1); (6m and 1)(m and 21)	(6m and 7)(m and 3); (6m and 3)(m and 7)	(8m and 18)(m and 1); (8m and 1)(m and 18)	(8m and 9)(m and 2); (8m and 2)(m and 9)
(3m and 21)(2m and 1); (3m and 1)(2m and 21)	(3m and 7)(2m and 3); (3m and 3)(2m and 7)	(8m and 6)(m and 3); (8m and 3)(m and 6)	
		(4m and 18)(2m and 1); (4m and 1)(2m and 18)	(4m and 9)(2m and 2); (4m and 2)(2m and 9)
		(4m and 6)(2m and 3); (4m and 3)(2m and 6)	