KEY

When Is a Wrestler "King of the Ring"?

Factor each trinomial below. Find your answer and notice the letter next to it. Write this letter in the box containing the number of that exercise. Keep working and you will get the gripping answer to the title question.

(1) $n^2 + 6n + 5$
(2) $n^2 + 7n + 10$
(3) $n^2 - 7n + 12$
(4) $n^2 - 11n + 28$
(5) $n^2 + 2n - 15$
(6) $n^2 - 5n - 24$
(7) $n^2 + n - 56$

Answers:

(L) $(n + 2)(n + 6)$
#5 (H) $(n + 5)(n - 3)$
#1 (W) $(n + 5)(n + 1)$
#3 (E) $(n - 3)(n - 4)$
(B) $(n - 1)(n + 15)$
#7 (S) $(n + 8)(n - 7)$
#2 (H) $(n + 2)(n + 5)$
#6 (E) $(n - 8)(n + 3)$
(R) $(n - 12)(n - 2)$
#4 (N) $(n - 7)(n - 4)$

(8) $t^2 + 10t + 16$
(9) $t^2 - 15t + 50$
(10) $t^2 + 8t - 9$
(11) $t^2 - 7t - 30$
(12) $t^2 - t - 30$
(13) $t^2 + 14t + 48$
(14) $t^2 + 8t - 48$

Answers:

(N) $(t - 6)(t + 5)$ #12
(V) $(t - 25)(t + 2)$
(T) $(t - 5)(t - 10)$ #9
(T) $(t + 6)(t + 8)$ #13
(O) $(t - 10)(t + 3)$ #11
(B) $(t + 15)(t - 2)$
(I) $(t + 8)(t + 2)$ #8
(H) $(t - 4)(t + 12)$ #14
(S) $(t + 9)(t - 1)$ #10
(A) $(t - 24)(t + 2)$

(15) $a^2 + 5ab + 6b^2$
(16) $a^2 - 4ab - 21b^2$
(17) $a^2 + 6ab - 7b^2$
(18) $a^2 - 14ab - 32b^2$
(19) $a^2 - 29ab + 100b^2$
(20) $a^2 + 7ab - 18b^2$
(21) $a^2 + 2ab + b^2$

Answers:

(K) $(a - 8b)(a + 4b)$
(H) $(a + 7b)(a - b)$ #17
(A) $(a - 20b)(a + 5b)$
(E) $(a + 2b)(a + 3b)$ #15
(W) $(a + 9b)(a - 2b)$ #20
(T) $(a - 7b)(a + 3b)$ #16
(O) $(a - 25b)(a - 4b)$ #19
(S) $(a + 6b)(a + 3b)$
(N) $(a + b)(a + b)$ #21
(R) $(a - 16b)(a + 2b)$ #18

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
W	H	E	N	H	E	S	I	T	S	O	N	T	H	E	T	H	R	O	W	N

OBJECTIVE 3–n: To factor trinomials of the form $x^2 + bx + c$, where c is positive or negative (review).

What Happened When a Strong Wind Blew Through the Boarding House?

Factor each trinomial below. Find one of the factors in **each** column of binomials. Notice the letter next to one factor and the number next to the other. Write the letter in the box at the bottom of the page that contains the matching number.

(1) $3x^2 + 7x + 2$ $(3x+1)(x+2)$
(2) $2x^2 + 5x + 3$ $(2x+3)(x+1)$
(3) $3x^2 - 16x + 5$ $(3x-1)(x-5)$
(4) $7x^2 - 9x + 2$ $(7x-2)(x-1)$
(5) $6u^2 + 5u + 1$ $(2u+1)(3u+1)$
(6) $8u^2 - 9u + 1$ $(8u-1)(u-1)$
(7) $10u^2 + 17u + 3$ $(2u+3)(5u+1)$
(8) $9u^2 - 9u + 2$ $(3u-2)(3u-1)$
(9) $5u^2 + 11u + 6$ $(5u+6)(u+1)$

(5) $(5u + 3)$
(3) $(x - 1)$ #4
(8) $(3x + 1)$ #1
(14) $(3u - 1)$ #8
(6) $(2u + 3)$ #7
(15) $(x + 1)$ #2
(9) $(5u + 6)$ #9
(7) $(2u + 1)$ #5
(11) $(3x - 1)$ #3
(17) $(u - 1)$ #6

(Y) $(3u - 2)$ #8
(E) $(x - 5)$ #3
(G) $(8u - 1)$ #6
(O) $(7x - 2)$ #4
(R) $(5u + 1)$ #7
(W) $(x + 2)$ #1
(L) $(7x + 2)$
(I) $(2x + 3)$ #2
(E) $(u + 1)$ #9
(S) $(3u + 1)$ #5

(10) $3n^2 + 2n - 1$ $(3n-1)(n+1)$
(11) $5n^2 - 4n - 1$ $(5n+1)(n-1)$
(12) $2n^2 + 5n - 3$ $(2n-1)(n+3)$
(13) $7n^2 - 13n - 2$ $(7n+1)(n-2)$
(14) $3t^2 + 14t - 5$ $(3t-1)(t+5)$
(15) $4t^2 - 11t + 7$ $(4t-7)(t-1)$
(16) $6t^2 + 5t - 1$ $(6t-1)(t+1)$
(17) $3t^2 - 20t - 7$ $(3t+1)(t-7)$

(12) $(3t - 1)$ #14
(5) $(n - 1)$ #11
(4) $(3t + 1)$ #17
(10) $(n - 2)$ #13
(13) $(t + 1)$ #16
(2) $(3n - 1)$ #10
(16) $(2n - 1)$ #12
(4) $(3t - 7)$
(1) $(4t - 7)$ #15

(N) $(n + 3)$ #12
(R) $(t - 1)$ #15
(P) $(2t + 1)$
(O) $(n + 1)$ #10
(F) $(t + 5)$ #14
(E) $(5n + 1)$ #11
(M) $(t - 7)$ #17
(R) $(7n + 1)$ #13
(L) $(6t - 1)$ #16

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
R	O	O	M	E	R	S	W	E	R	E	F	L	Y	I	N	G

OBJECTIVE 3–o: To factor trinomials of the form $ax^2 + bx + c$, where a is a positive integer greater than 1.