What Happens If the Jolly Green Giant Steps on Your House?

For exercises in the first column, express each square as a trinomial. For the remaining exercises, factor each trinomial as the square of a binomial, if possible. (If this is not possible, the correct answer is "not possible.") Find your answer below. Write the letter of the exercise in the box containing the number of its answer.

Express as a trinomial:

(E) $(u+3)^2$

(O) $(u-8)^2$

(S) $(2u+5)^2$

(L) $(1-4u)^2$

(T) $(u+2v)^2$

(U) $(7u-3v)^2$

(O) $(uv+6)^2$

Answers:

(13) $4u^2+20u+25$

(3) $4u^2+16u+25$

(9) u^2+6u+9

(10) $u^2+4uv+4v^2$

(14) $49u^2-31uv+9v^2$

(6) $1-8u+16u^2$

(2) $u^2-16u+64$

(18) $u^2v^2+12uv+36$

(5) $u^2+7uv+4v^2$

(12) $49u^2-42uv+9v^2$

Factor:

(E) t^2+4t+4

(U) $t^2-12t+36$

(L) $t^2-18t+81$

(Y) $25+10t+t^2$

(W) $4t^2+20t+25$

(S) $9t^2-12t+4$

(I) $t^2+10t+20$

Answers:

(5) not possible

(7) $(t-9)^2$

(19) $(t-12)^2$

(4) $(2t+5)^2$

(15) $(t+2)^2$

(21) $(3t-2)^2$

(16) $(2t-9)^2$

(3) $(t-6)^2$

(1) $(5+t)^2$

(8) $(3t-5)^2$

Factor:

(D) $49a^2+14a+1$

(O) $16a^2-24a+9$

(G) $a^2-8a+64$

(M) $a^2+2ab+b^2$

(H) $a^2+10ab+25b^2$

(R) $4a^2-12ab+9b^2$

(M) $100a^2-20ab+b^2$

Answers:

(8) not possible

(11) $(10a-3b)^2$

(16) $(7a+1)^2$

(11) $(10a-b)^2$

(20) $(a+b)^2$

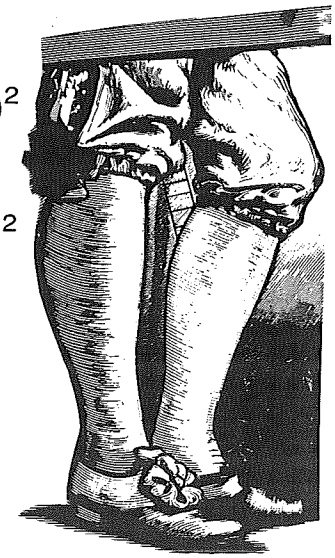
(17) $(2a-3b)^2$

(19) $(4a-3)^2$

(20) $(a+3b)^2$

(14) $(a+5b)^2$

(19) $(4a-8)^2$



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21

OBJECTIVE 3–j: To find squares of binomials; to factor trinomial squares.

Why Doesn't Gyro Bet on Even Numbers When Playing Roulette?

Factor completely each polynomial below. Find your answer and notice the two letters next to it. Write these letters in the two boxes at the bottom of the page that contain the number of that exercise.

(1) $3x^2 - 75$	(LO) $5(x-4)^2$	(SF) $5(x+3)^2$
(2) $5x^2 + 30x + 45$	(EL) $2(x-12)^2$	(NT) $2(x-6)^2$
(3) $x^3 - 49x$	(HE) $3(x+5)(x-5)$	(CH) $3(x+2)(x-2)$
(4) $2x^2 - 24x + 72$	(EA) $x(x+8)(x-8)$	(ST) $x(x+7)(x-7)$
(5) $2k^3 - 8k$	(HI) $5k(k+10)^2$	(HE) $2k(k+2)(k-2)$
(6) $54k^2 - 24$	(EN) $3(k-2)^2$	(LS) $6(3k+1)(3k-1)$
(7) $5k^3 + 100k^2 + 500k$	(SO) $2k(k+4)(k-4)$	(OR) $3(2k-3)^2$
(8) $12k^2 - 36k + 27$	(DS) $6(3k+2)(3k-2)$	(TE) $5k(k+8)^2$
(9) $7a^3b - 7ab^3$	(MI) $7ab(a+2b)^2$	(AT) $2b^2(2a+4)^2$
(10) $32a^2b^2 + 16ab^2 + 2b^2$	(LA) $4ab(a-3b)^2$	(AV) $4ab(a-5b)^2$
(11) $4a^3b - 40a^2b^2 + 100ab^3$	(OD) $a^2b(2ab+1)(2ab-1)$	(MA) $a^2b(ab+2)(ab-2)$
(12) $4a^4b^3 - a^2b$	(WA) $7ab(a+b)(a-b)$	(IN) $2b^2(4a+1)^2$

5	5	9	9	4	4	3	3	1	1	12	12	6	6	10	10	7	7	2	2	11	11	8	8

OBJECTIVE 3–k: To factor completely a polynomial that has as a factor a difference of squares or a trinomial square.