

WHY ARE MR. AND MRS. NUMBER SO HAPPY?

Find the simplest form for each expression below in the adjacent answer column. The letter of the exercise goes in the box that contains the number of the corresponding answer.

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|-----------------------------|--------------|----------------------------------|-----------------|
| (E) $x^3 \cdot x^4$ | (19) $-3x^6$ | (T) $(u^2v)(-6uv^2)$ | (21) $-8u^6v^4$ |
| (O) $3x^2 \cdot x$ | (14) $3x^3$ | (E) $v(uv^2)(u^3v)$ | (3) u^4v^4 |
| (T) $2x^2 \cdot 3x$ | (25) x^9 | (I) $(4uv)(-u)(2u^4v)$ | (12) $-8u^6v^2$ |
| (I) $x \cdot x^2 \cdot x^3$ | (7) x^7 | (A) $(-3u^2)(-u^2v^2)(2uv)$ | (17) u^3v^7 |
| (A) $x^4(-3x^2)$ | (10) x^6 | (L) $(-u^2)(-6u^2v^3)(-u^3v^4)$ | (5) $6u^5v^3$ |
| (H) $(-2x^2)(-2x)$ | (2) $4x^3$ | (G) $(-2u)(u^2v)(4u^3v^3)$ | (13) $-6u^3v^3$ |
| (E) $x(-x^4)(-x^4)$ | (23) $6x^3$ | (V) $(\frac{1}{2}u^2v^3)(2uv^4)$ | (24) $-6u^7v^7$ |

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|-------------------------|------------------|----------------------------------|-------------------|
| (R) $(ab^2)(a^2b)$ | (18) $5a^6b^4$ | (L) $(-b^2)(9a^2b^3)$ | (22) $-a^3b^5c^2$ |
| (A) $(3ab)(2a^3b)$ | (6) a^3b^3 | (Y) $(3a^2c)(-3bc^2)$ | (27) $-ab^3c^2$ |
| (G) $ab(-4ab^3)$ | (26) $12a^2b^8$ | (E) $c(-ab)(a^2b^2c^2)$ | (28) $-a^3b^3c^3$ |
| (E) $(-a^4b)(-5a^2b^3)$ | (8) $-4a^2b^4$ | (O) $(-3a^2c)(-3b^2c)$ | (15) $9a^3b^3c^5$ |
| (T) $(-2a^3b)(2ab^3)$ | (11) $-12a^3b^7$ | (T) $(-ab)(-b^2c^2)(-a^2b^2)$ | (4) $-9a^2bc^3$ |
| (N) $(6a^2b^2)(-2ab^5)$ | (1) $-4a^4b^4$ | (H) $(a^2bc^2)(b^2c^3)(9a)$ | (20) $-9a^2b^5$ |
| (O) $(-4ab^4)(-3ab^4)$ | (16) $6a^4b^2$ | (N) $(3b^2)(\frac{1}{9}abc)(-c)$ | (9) $9a^2b^2c^2$ |

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92 What Happens to a Dog Who Eats Table Scraps ?

Simplify each expression below. Find your answer in the corresponding answer column and notice the letter next to it. Write this letter in the box that contains the number of that exercise.



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|----|----------------|---|-------------|
| 1 | $(x^3)^2$ | L | $81x^2$ |
| 2 | $(x^4)^3$ | T | $125x^{11}$ |
| 3 | $(2x^2)^3$ | S | $-32x^{15}$ |
| 4 | $(-4x^3)^2$ | G | $8x^6$ |
| 5 | $(-3x^4)^3$ | E | $-64x^4$ |
| 6 | $(8x^5)^2$ | H | x^6 |
| 7 | $(-2x^3)^5$ | N | $-12x^3$ |
| 8 | $(4x)^3$ | S | $64x^{10}$ |
| 9 | $(-9x)^2$ | E | x^{12} |
| 10 | $x(2x^2)^3$ | P | $64x^3$ |
| 11 | $-3x(2x)^2$ | E | $16x^6$ |
| 12 | $x^2(5x^3)^3$ | I | $8x^7$ |
| 13 | $-4x^2(-4x)^2$ | T | $-27x^{12}$ |

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|----|----------------------|---|--------------|
| 14 | $(4a^2b^3)^2$ | H | $-a^6b^6$ |
| 15 | $(2a^4b)^3$ | E | $-a^{10}b^8$ |
| 16 | $(-5a^3b^3)^2$ | R | $16a^4b^6$ |
| 17 | $(ab^5)^3$ | N | a^8b^9 |
| 18 | $(-a^2b^2)^3$ | I | $25a^6b^6$ |
| 19 | $(-8ab^4)^2$ | S | $18a^5b^2$ |
| 20 | $2a(3a^2b)^2$ | U | $27a^3b^4$ |
| 21 | $-b(5a^3b)^3$ | N | a^3b^{15} |
| 22 | $3ab(2ab^2)^4$ | I | $64a^2b^8$ |
| 23 | $(ab^3)^2(a^2b)^3$ | O | $48a^5b^9$ |
| 24 | $(-2ab^2)^2(-ab)^3$ | S | $8a^{12}b^3$ |
| 25 | $(3ab^2)(3ab)^2$ | G | $-4a^5b^7$ |
| 26 | $(-a^2b)^4(-a^2b^4)$ | T | $-125a^9b^4$ |

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