

# What Should You Do If Nobody Will Sing With You?



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

- ①  $2\sqrt{5} + 4\sqrt{5} = 6\sqrt{5}$  (T)
- ②  $7\sqrt{3} - 3\sqrt{3} = 4\sqrt{3}$  (E)
- ③  $2\sqrt{6} - 7\sqrt{6} = -5\sqrt{6}$  (U)
- ④  $5\sqrt{x} + \sqrt{x} = 6\sqrt{x}$  (I)
- ⑤  $9\sqrt{5} - 8\sqrt{5} = 1\sqrt{5}$  (A)

- ⑥  $5\sqrt{10} + 4\sqrt{10} - \sqrt{10} = 8\sqrt{10}$  (E)
- ⑦  $2\sqrt{3} - 6\sqrt{3} - 3\sqrt{3} = -7\sqrt{3}$  (T)
- ⑧  $6\sqrt{7} + 3\sqrt{3} - 2\sqrt{7} = 4\sqrt{7} + 3\sqrt{3}$  (F)
- ⑨  $\sqrt{2} - 4\sqrt{6} + 5\sqrt{2} + \sqrt{6} = 6\sqrt{2} - 3\sqrt{6}$  (Y)
- ⑩  $3\sqrt{a} + 9\sqrt{b} - \sqrt{b} - 2\sqrt{a} = \sqrt{a} + 8\sqrt{b}$  (R)

- (L)  $4\sqrt{5}$       (~~E~~)  $4\sqrt{3}$
- (~~J~~)  $6\sqrt{x}$       (R)  $3\sqrt{x}$
- (~~T~~)  $6\sqrt{5}$       (N)  $6\sqrt{3}$
- (~~A~~)  $\sqrt{5}$       (~~U~~)  $-5\sqrt{6}$

- (H)  $8\sqrt{3}$       (S)  $4\sqrt{2} - \sqrt{6}$
- (~~E~~)  $8\sqrt{10}$       (~~F~~)  $4\sqrt{7} + 3\sqrt{3}$
- (~~R~~)  $\sqrt{a} + 8\sqrt{b}$       (A)  $3\sqrt{a} + 7\sqrt{b}$
- (~~T~~)  $-7\sqrt{3}$       (~~Y~~)  $6\sqrt{2} - 3\sqrt{6}$

- (~~E~~) ⑪  $3\sqrt{12} + 4\sqrt{3} = 6\sqrt{3} + 4\sqrt{3} = 10\sqrt{3}$
- (T) ⑫  $8\sqrt{5} - 2\sqrt{45} = 8\sqrt{5} - 6\sqrt{5} = 2\sqrt{5}$
- (~~O~~) ⑬  $7\sqrt{18} + 2\sqrt{50} = 21\sqrt{2} + 10\sqrt{2} = 31\sqrt{2}$
- (R) ⑭  $6\sqrt{24} - 5\sqrt{54} = 12\sqrt{6} - 15\sqrt{6} = -3\sqrt{6}$
- (N) ⑮  $-\sqrt{27} + 4\sqrt{48} - 3\sqrt{3} + 16\sqrt{3} = -3\sqrt{3} + 16\sqrt{3} = 13\sqrt{3}$

- (L) ⑯  $5\sqrt{8} + \sqrt{98} - 2\sqrt{18} = 10\sqrt{2} + 7\sqrt{2} - 6\sqrt{2} = 11\sqrt{2}$
- (D) ⑰  $2\sqrt{90} - 3\sqrt{20} + \sqrt{40} = 6\sqrt{10} - 6\sqrt{5} + 2\sqrt{10} = 8\sqrt{10} - 6\sqrt{5}$
- (S) ⑱  $4\sqrt{63} - 9\sqrt{28} + 2\sqrt{44} = 12\sqrt{7} - 18\sqrt{7} + 4\sqrt{11} = -6\sqrt{7} + 4\sqrt{11}$
- (K) ⑲  $2\sqrt{27x} + \sqrt{75x} + 5\sqrt{12x} = 6\sqrt{3x} + 5\sqrt{3x} + 10\sqrt{3x} = 21\sqrt{3x}$
- (U) ⑳  $-6\sqrt{9x} + 3\sqrt{64x} - \sqrt{50x} = -18\sqrt{x} + 24\sqrt{x} - 5\sqrt{2x} = 6\sqrt{x} - 5\sqrt{2x}$

- (~~R~~)  $-3\sqrt{6}$       (~~E~~)  $10\sqrt{3}$
- (S)  $-4\sqrt{3}$       (L)  $2\sqrt{6}$
- (~~T~~)  $2\sqrt{5}$       (~~N~~)  $13\sqrt{3}$
- (E)  $24\sqrt{2}$       (~~O~~)  $31\sqrt{2}$

- (B)  $8\sqrt{3x}$       (~~U~~)  $6\sqrt{x} - 5\sqrt{2x}$
- (~~L~~)  $11\sqrt{2}$       (~~S~~)  $-6\sqrt{7} + 4\sqrt{11}$
- (S)  $\sqrt{10} - 9\sqrt{5}$       (~~D~~)  $8\sqrt{10} - 6\sqrt{5}$
- (~~K~~)  $21\sqrt{3x}$       (P)  $3\sqrt{7} + \sqrt{11}$

10	2	15	7	5	17	20	11	1	9	13	3	14	18	6	16	8	19	4	12
R	E	N	T	A	D	U	E	T	Y	O	U	R	S	E	L	F	K	I	T

# Do Elephants Know How to Gamble?



Simplify each expression below. Assume that all variables represent nonnegative numbers. Find your answer in the corresponding set of answer boxes. Print the letter of the exercise in the box above the answer.

- T  $\sqrt{9x^2} = 3x$       H  $\sqrt{12x^2} = 2x\sqrt{3}$       E  $-\sqrt{28x^4} = -2x^2\sqrt{7}$       D  $\sqrt{7x^2y} = x\sqrt{7y}$   
 E  $-\sqrt{49x^2} = -7x$       O  $-\sqrt{45x^2} = -3x\sqrt{5}$       Y  $\sqrt{16xy^2} = 4y\sqrt{x}$       H  $\sqrt{9x^2y^4} = 3xy^2$   
 A  $\sqrt{4x^2y^2} = 2xy$       T  $\sqrt{25y^4} = 5y^2$       V  $-\sqrt{20xy^2} = -2y\sqrt{5x}$       N  $\sqrt{24x^4y^2} = 2x^2y\sqrt{6}$

T	H	E	Y	D	O	N	T	H	A	V	E
$5y^2$	$2x\sqrt{3}$	$-7x$	$4y\sqrt{x}$	$2x\sqrt{6y}$	$x\sqrt{7y}$	$-3x\sqrt{5}$	$2x^2\sqrt{6}$	$3x$	$3x^2y^3$	$2xy$	$-2x^2\sqrt{7}$

- E  $\sqrt{a^3} = a\sqrt{a}$       E  $\sqrt{75a^2b^3} = 5ab\sqrt{3b}$       S  $\sqrt{18a^6b^2} = 3a^3b\sqrt{2}$       V  $2\sqrt{50ab^5} = 10b^2\sqrt{a}$   
 T  $-\sqrt{40a^3} = -2a\sqrt{10a}$       I  $\sqrt{144b^6} = 12b^3$       H  $\sqrt{15a^8b^3} = a^4b\sqrt{15b}$       D  $8\sqrt{300a^4b^6} = 80a^2b^3\sqrt{3}$   
 A  $\sqrt{54a^3b^2} = 3ab\sqrt{6a}$       E  $-\sqrt{1000a^6} = -10a^3\sqrt{10}$       A  $\sqrt{a^5b^8} = a^2b^4\sqrt{a}$       G  $5\sqrt{98a^{20}b^3} = 35a^{10}b\sqrt{2b}$

T	H	E	V	E	G	A	S	I	D	E	A	
$-2a\sqrt{10a}$	$a^4b\sqrt{15b}$	$-10a^3\sqrt{10}$	$40ab^3\sqrt{3}$	$10b^2\sqrt{2ab}$	$a\sqrt{a}$	$35a^{10}b\sqrt{2b}$	$3ab\sqrt{6a}$	$3a^3b\sqrt{2}$	$12b^3$	$80a^2b^3\sqrt{3}$	$5ab\sqrt{3b}$	$a^2b^4\sqrt{a}$