

"What do you get when you mix prune juice with holy water?"

Simplify the following expressions. The answer to each problem will match a letter that will allow you to figure out the joke.

- (A) 1. $5i \cdot 3i = 15i^2 = 15(-1) = -15$ I: 81
- (S) 2. $-\sqrt{-10} \cdot 4\sqrt{-2} = -i\sqrt{10} \cdot 4i\sqrt{2} = -4i^2\sqrt{20} = -4(-1) \cdot 2\sqrt{5} = 8\sqrt{5}$ Y: $3\sqrt{5}$
- (N) 3. $7\sqrt{6} \cdot 2\sqrt{-3} = 7\sqrt{6} \cdot 2i\sqrt{3} = 14i\sqrt{18} = 14i \cdot 3\sqrt{2} = 42i\sqrt{2}$ E: $3 + 33i$
- (U) 4. $-i\sqrt{2} \cdot i\sqrt{7} = -i^2\sqrt{14} = -(-1)\sqrt{14} = \sqrt{14}$ N: $42i\sqrt{2}$
- (L) 5. $i\sqrt{2} \cdot i\sqrt{5} \cdot i\sqrt{15} = i^2 \cdot i \sqrt{2 \cdot 5 \cdot 3} = 5i^2 \cdot i\sqrt{6} = 5(-1)i\sqrt{6} = -5i\sqrt{6}$ A: -15
- (T) 6. $5\sqrt{3}(4\sqrt{6} - 2i\sqrt{21}) = 20\sqrt{18} - 10i\sqrt{63} = 20 \cdot 3\sqrt{2} - 10i \cdot 3\sqrt{7} = 60\sqrt{2} - 30i\sqrt{7}$ O: $11 + 2i$
- (V) 7. $6i(4 - 3i) = 24i + 18$ V: $18 + 24i$
- (E) 8. $(3 + 3i)(6 + 5i) = 18 + 15i + 18i + 15i^2 = 18 + 33i - 15 = 3 + 33i$ U: $\sqrt{14}$
- (O) 9. $(-3 + 4i)(-1 - 2i) = 3 + 6i - 4i + 8i^2 = 3 + 2i - 8 = -5 - 6i$ L: $-5i\sqrt{6}$
- (G) 10. $(-4 - i)^2 = (-4 - i)(-4 - i) = 16 + 4i + 4i + i^2 = 16 + 8i - 1 = 15 + 8i$ G: $15 + 8i$
- (I) 11. $(-3i)^4 = 3^4 i^4 = 81(i^2)^2 = 81(-1)^2 = 81$ M: i
- (R) 12. $(i\sqrt{2})^5 = i^5 \sqrt{2^5} = (i^2)^2 \cdot i \cdot 2^2 \sqrt{2} = (-1)^2 \cdot i \cdot 4\sqrt{2} = 4i\sqrt{2}$ T: $60\sqrt{2} - 30i\sqrt{7}$
- (M) 13. $i^{13} = (i^2)^6 \cdot i = (-1)^6 \cdot i = 1 \cdot i = i$ R: $4i\sqrt{2}$

A	R	E	L	I	G	I	O	U	S
1	12	8	5	11	10	11	9	4	2
M	O	V	E	M	E	N	T		
13	9	7	8	13	8	3	6		

Answer: _____