

"What do you call four Spanish-speaking men standing in quicksand?"

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

1. $5i \cdot 8i = 40i^2 = \boxed{-40}$

U: $-11 + 29i$

2. $\sqrt{-2} \cdot \sqrt{-7}$
 $i\sqrt{2} \cdot i\sqrt{7} = i^2\sqrt{14} = \boxed{-\sqrt{14}}$

S: 40

O: $6\sqrt{2} + 3i\sqrt{10}$

3. $-2\sqrt{-3} \cdot 4\sqrt{5}$
 $-2i\sqrt{3} \cdot 4i\sqrt{5} = \boxed{-8i\sqrt{15}}$

H: 14i

N: $-\sqrt{14}$

4. $\sqrt{-2} \cdot \sqrt{-14} \cdot \sqrt{-7}$
 $i\sqrt{2} \cdot i\sqrt{14} \cdot i\sqrt{7}$
 $i^3 \sqrt{196} = \boxed{-14i}$

C: $40 - 42i$

5. $\sqrt{3}(2\sqrt{6} + i\sqrt{30})$
 $2\sqrt{18} + i\sqrt{90}$
 $2 \cdot 3\sqrt{2} + 3i\sqrt{10} = \boxed{6\sqrt{2} + 3i\sqrt{10}}$

D: 4i

O: $28 + 24i$

6. $(2 + 3i)(5 + 7i)$
 $10 + 14i + 15i + 21i^2$
 $10 + 29i - 21 = \boxed{-11 + 29i}$

T: $-11 - 2i$

7. $(4 + 2i)(5 - 3i)(1 + i)$
 $(20 - 12i + 10i + 6i^2)(1 + i)$
 $(20 - 2i - 6)(1 + i)$
 $14 - 2i + 14i - 2i^2$
 $14 - 2i + 2 = \boxed{16 - 2i}$

I: -14i

8. $(7 - 3i)^2$
 $(7 - 3i)(7 - 3i)$
 $49 - 21i - 21i + 9i^2$
 $49 - 42i - 9 = \boxed{40 - 42i}$

A: -40

Q: -4

9. $(1 + 2i)^3 = (1 + 2i)(1 + 2i)(1 + 2i)$
 $= (1 + 2i + 2i + 4i^2)(1 + 2i)$
 $= (-3 + 4i)(1 + 2i)$
 $= -3 - 6i + 4i + 8i^2$
 $= \boxed{-11 - 2i}$

R: $-8i\sqrt{15}$

F: 30i

10. $4i^{10}$
 $4(i^2)^5$
 $4(-1)^5$
 $\boxed{-4}$

C: 30

11. $(5i^{15})(6i^{11})$
 $30i^{16}$
 $30(i^2)^8$
 $30(-1)^8 = \boxed{30}$

W: $8i\sqrt{15}$

Q U A T R O C I N C O
 10 6 1 9 3 7 11 4 2 8 5