SOLUCIONES DE MULTIPLICACIÓN DE NÚMEROS COMPLEJOS EN FORMA BINÓMICA

Dados los siguientes números complejos, realiza los siguientes *productos: Recuerda que* $i^2 = -1$

A. (3+i)
B. (1-3i)
C. (-5+3i)
D. - (6+4i)
E. (0.5-4i)
F. (-1.5-i)
G. (-3.8+2.4i)
H. - (1.3+0.5i)

1. **A·B = (**3+i) ·(1-3i) = 3-9i + i -3i^2 = 3 -8i + 3 = 6-8i

2. **F·G·D=** (-1.5-i) · (-3.8+2.4i) · (- (6+4i)) = (5.7-3.6i + 3.8i-2.4i^2) · (- (6+4i))= (8.1+0.2i)· (-6-4i) = -48.6-32.4i -1.2i-0.8i^2 = -47.8 -33.6i

3. **D·H =** - (6+4i)·(- (1.3+0.5i)) = (-6-4i) · (-1.3-0.5i) = 7.8 +3i + 5.2i +2i^2 = 5.8 +8.2i

4. **C·D·E =** (-5+3i) · (-6-4i) · (0.5-4i) = (30+20i-18i-12i^2)·(0.5-4i) = (42 + 2i)·(0.5-4i) = 21-168i +i -8i^2 = 29 -167i

5. **G·H =** (-3.8+2.4i) · (- (1.3+0.5i)) =4.94 +1.9i -3.12i -1.2i^2 = 6.14 – 1.22i

6. **A·B·G·H =** (A·B)·(G·H) = (6-8i)·(6.14-1.22i) = 36.84-7.32i -49.12i+9.76i^2 = 27.08-56.44i

7. **F·G·D·C·D·E =** (F·G·D)·(C·D·E) = (-47.8-33.6i)·(29-167i) = -1386.2 + 7982.6i -974.4i + 5611.2i^2 = -6997.4 +7008.2i