

SOLUCIONES DE DIVISIÓN DE NÚMEROS COMPLEJOS EN FORMA BINÓMICA

Dados los siguientes números complejos, realiza las siguientes divisiones:

- A. $(-5+3i)$
- B. $(0.5-4i)$
- C. $(-1.5-i)$
- D. $(-3.8+2.4i)$

$$\frac{A}{B} = \frac{-5 + 3i}{0.5 - 4i} = \frac{-5 + 3i}{0.5 - 4i} \cdot \frac{0.5 + 4i}{0.5 + 4i} = \frac{-2.5 - 20i + 1.5i + 12i^2}{0.25 + 16}$$

$$= \frac{-14.5 - 18.5i}{16.25}$$

$$\frac{C}{B} = \frac{-1.5 - i}{0.5 - 4i} = \frac{-1.5 - i}{0.5 - 4i} \cdot \frac{0.5 + 4i}{0.5 + 4i} = \frac{-0.75 - 6i - 0.5i - 4i^2}{0.25 + 16}$$

$$= \frac{3.25 - 6.5i}{16.25}$$

$$\frac{C}{A} = \frac{-1.5 - i}{-5 + 3i} = \frac{-1.5 - i}{-5 + 3i} \cdot \frac{-5 - 3i}{-5 - 3i} = \frac{7.5 + 4.5i + 5i + 3i^2}{25 + 9} = \frac{4.5 + 9.5i}{34}$$

$$\frac{D}{B} = \frac{-3.8 + 2.4i}{0.5 - 4i} = \frac{-3.8 + 2.4i}{0.5 - 4i} \cdot \frac{0.5 + 4i}{0.5 + 4i} = \frac{-1.9 - 15.2i + 1.2i + 9.6i^2}{0.25 + 16}$$

$$= \frac{-11.5 - 14i}{16.25}$$