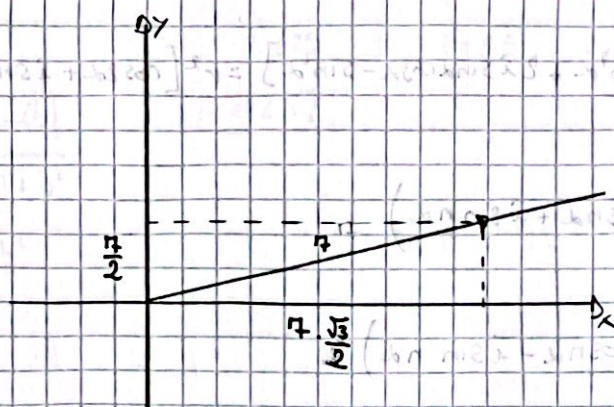


es
 $P\left(7; \frac{\pi}{6}\right)$



ADDIZIONE

$$(a+ib) + (c+id) = a+c + i(b+d)$$

PRODOTTO

$$(-2+3i)(7-2i) = -14 + 21i + 21i - 6i^2 = -14 + 42i + 6 = -8 + 25i$$

RECIPROCO

$$\frac{1}{a+ib} = \frac{a-ib}{(a+ib)(a-ib)} = \frac{a-ib}{a^2+b^2} = \frac{a}{a^2+b^2} - i \frac{b}{a^2+b^2}$$

es
 $(3-2i) : (4+i) = (3-2i) \cdot \frac{1}{4+i} = \frac{(3-2i)(4-i)}{(4+i)(4-i)} = \frac{12-3i-8i+2}{16+4} = \frac{10-11i}{20}$

es
 $(5-7i)^2 = (5-7i)(5-7i) = 25 - 35i - 35i + 49i^2 = -24 - 70i$

es
 $z = r(\cos \alpha + i \sin \alpha)$

$$z_1 = 3(\cos \beta + i \sin \beta)$$

$$z \cdot z_1 = r \cdot 3 \cdot (\cos \alpha \cos \beta + i \sin \alpha \cos \beta + i \cos \alpha \sin \beta - \sin \alpha \sin \beta) = r3 [\cos(\alpha+\beta) + i \sin(\alpha+\beta)]$$

$$\frac{z}{z_1} = \frac{r(\cos \alpha + i \sin \alpha)(\cos \beta - i \sin \beta)}{3(\cos \beta + i \sin \beta)(\cos \beta - i \sin \beta)} = \frac{r}{3} (\cos \alpha \cos \beta + i \sin \alpha \cos \beta - i \cos \alpha \sin \beta + \sin \alpha \sin \beta) = \frac{r}{3} [\cos(\alpha-\beta) + i \sin(\alpha-\beta)]$$

es
 $\frac{1}{r(\cos \alpha + i \sin \alpha)} = \frac{\cos \alpha - i \sin \alpha}{r(\cos \alpha + i \sin \alpha)(\cos \alpha - i \sin \alpha)} = \frac{\cos \alpha - i \sin \alpha}{r(\cos^2 \alpha + \sin^2 \alpha)} = \frac{\cos \alpha - i \sin \alpha}{r}$

es
 $\frac{\cos \alpha - i \sin \alpha}{r}$

$$(r[\cos \alpha + i \sin \alpha])^2 = r^2 [\cos^2 \alpha + 2i \sin \alpha \cos \alpha - \sin^2 \alpha] = r^2 [\cos 2\alpha + i \sin 2\alpha]$$

DEMOIVRE

$$[r(\cos \alpha + i \sin \alpha)]^n = r^n (\cos n\alpha + i \sin n\alpha)$$

$$[r(\cos \alpha + i \sin \alpha)]^{-n} = r^{-n} (\cos n\alpha - i \sin n\alpha)$$

PRODOTTO TRIGONOMETRICO

$$z_1 \cdot z_2 = r_1 \cdot r_2 (\cos(\alpha + \beta) + i \sin(\alpha + \beta))$$

RAPPORTO TRIGONOMETRICO

$$\frac{z_1}{z_2} = \frac{r_1}{r_2} (\cos(\alpha - \beta) + i \sin(\alpha - \beta))$$