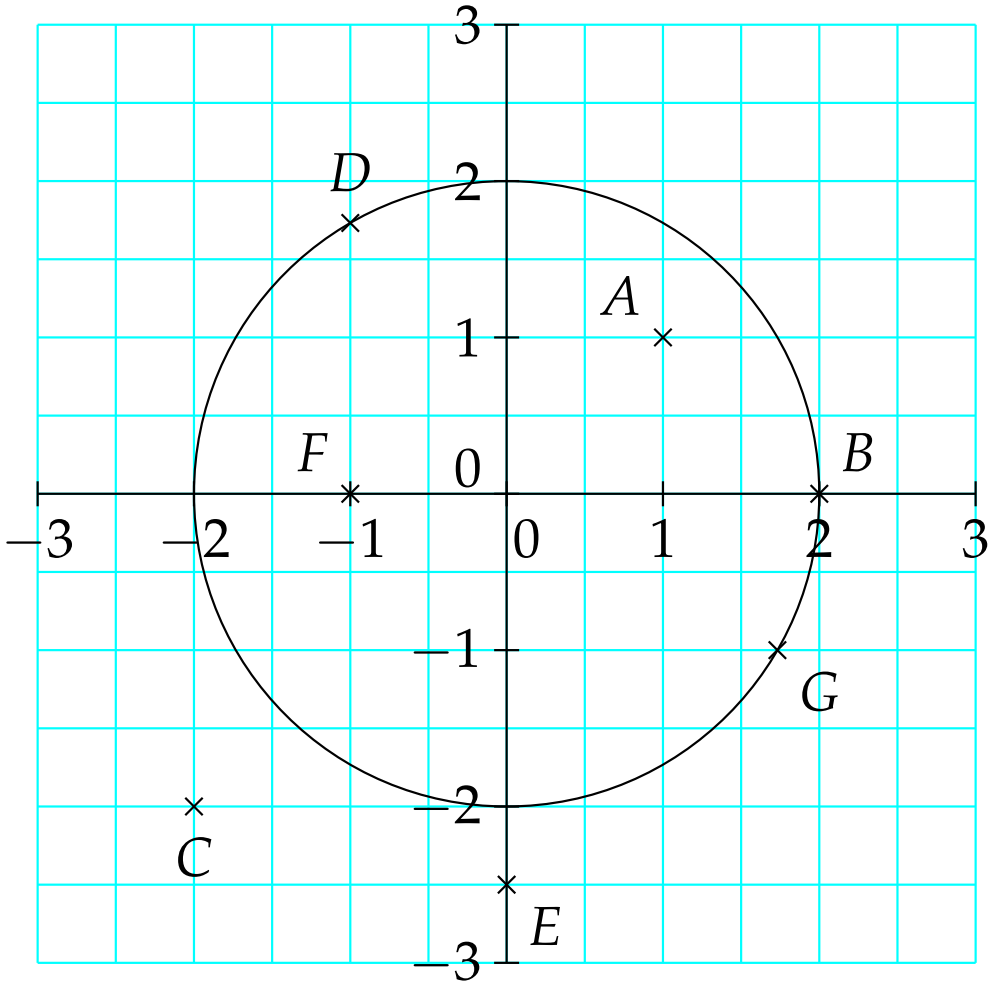
Activités mentales ex 5 page 248

Sésamath

Maths TS obligatoire

énoncé

Sur le graphique suivant, on a représenté des points et le cercle de centre l'origine et de rayon 2. Donner le module et un argument de leurs affixes.

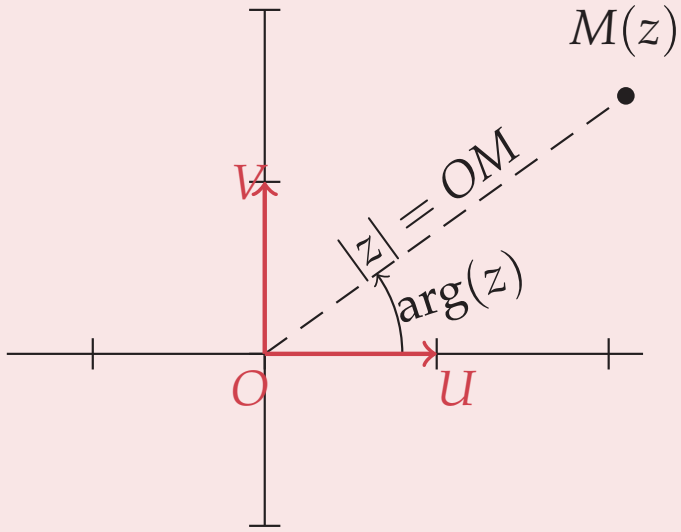


correction

Rappel

Soit z un complexe. M (ou $\vec{w}$) un point (ou un vecteur) d'affixe z.

- On appelle **module** de z la distance OM (ou la norme $||\vec{w}||$). Le module de z est noté $|z|$.
- Si $z \neq 0$, on appelle **argument** de z une mesure en radians de l'angle $\left(\vec{u} \ ; \ \overrightarrow{OM}\right)$ (ou $\left(\vec{u} \ ; \ \vec{w}\right)$). Un argument de z est noté $\arg(z)$.
- Le complexe nul n'a pas d'argument et a pour module 0.



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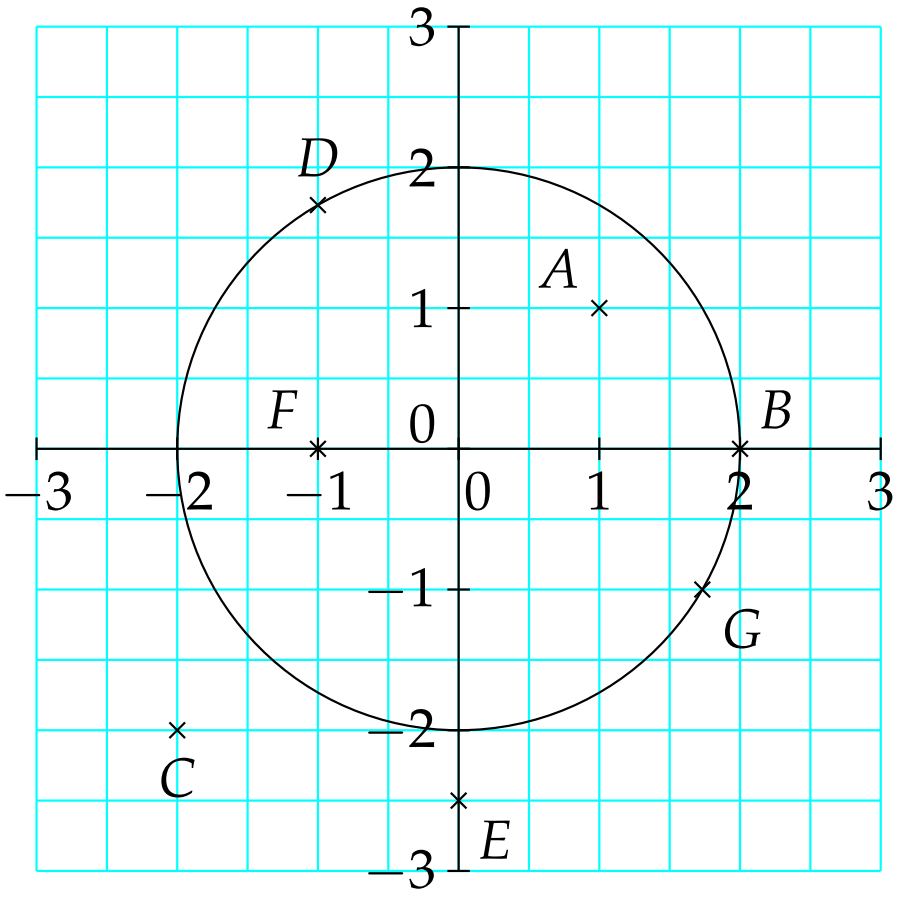

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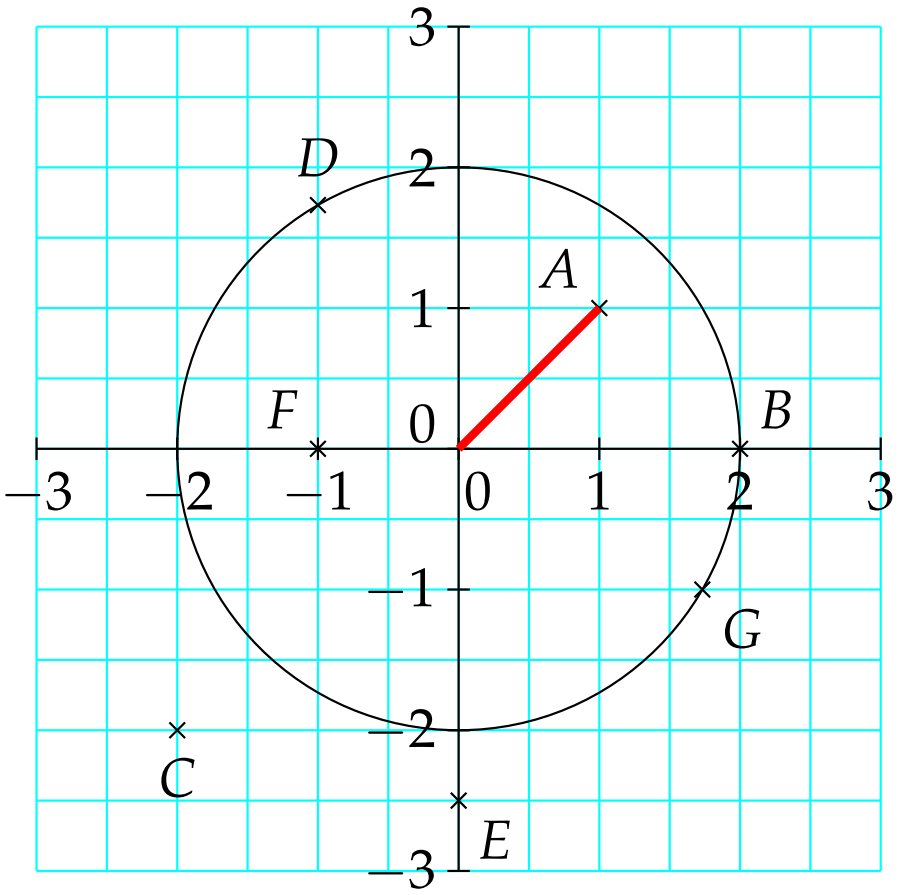

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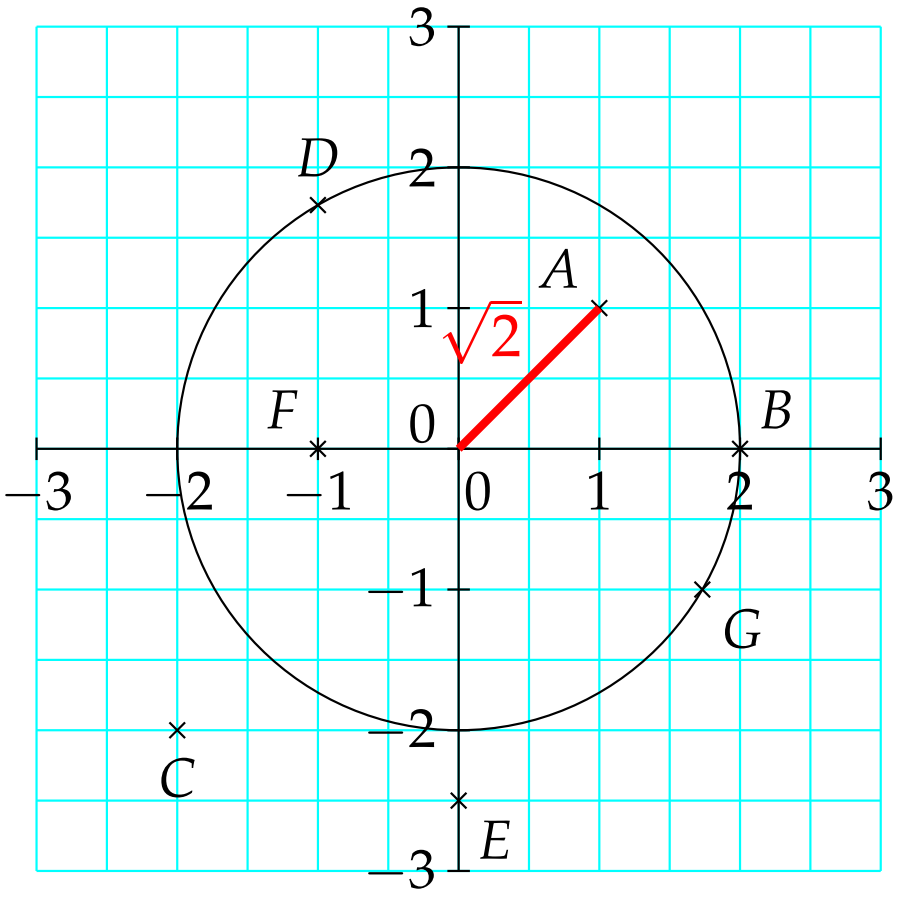

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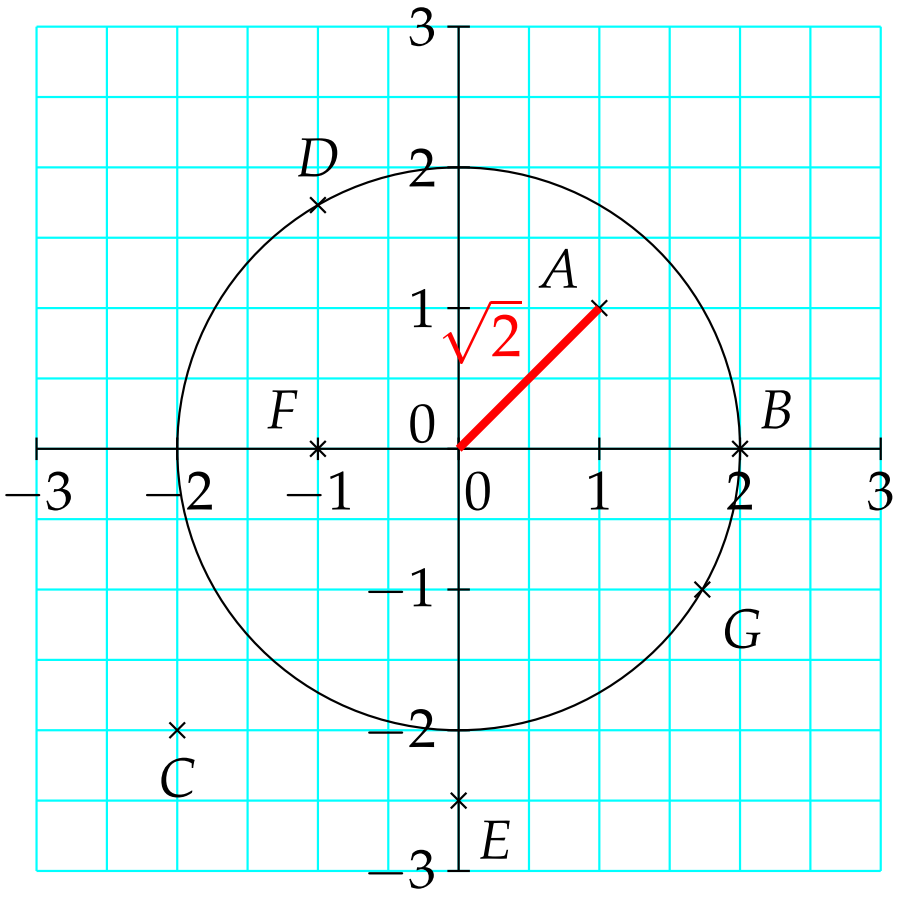
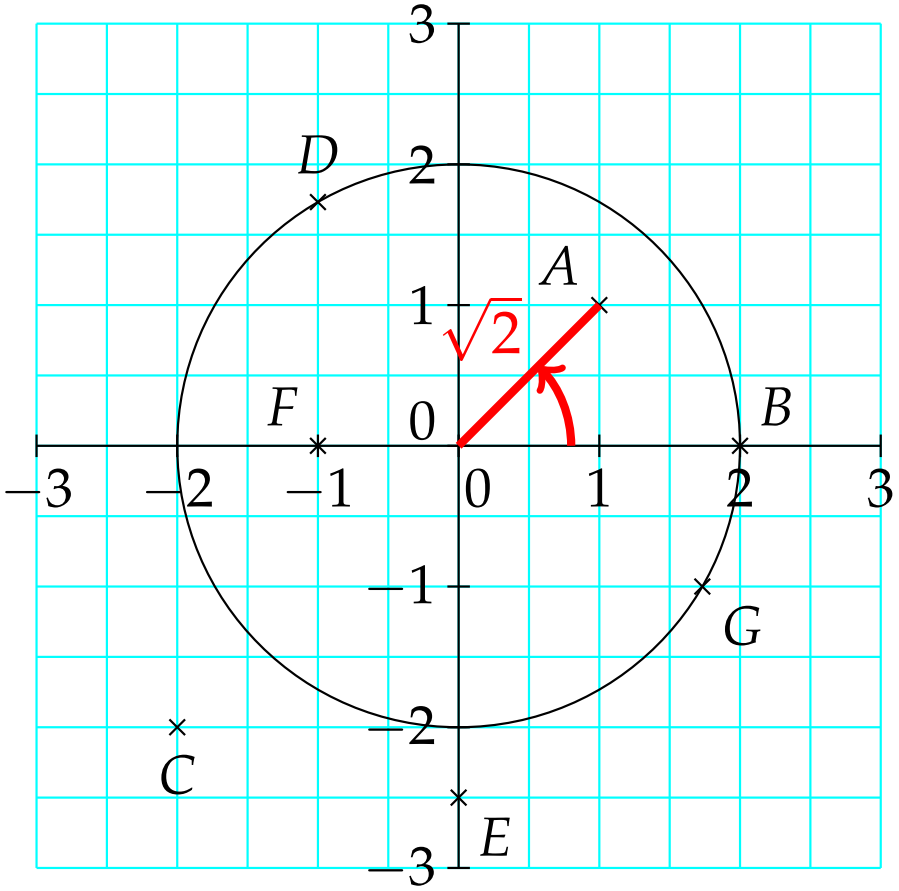


Ainsi, le module de l'affixe de A est $|z_A| = \sqrt{2}$

correction



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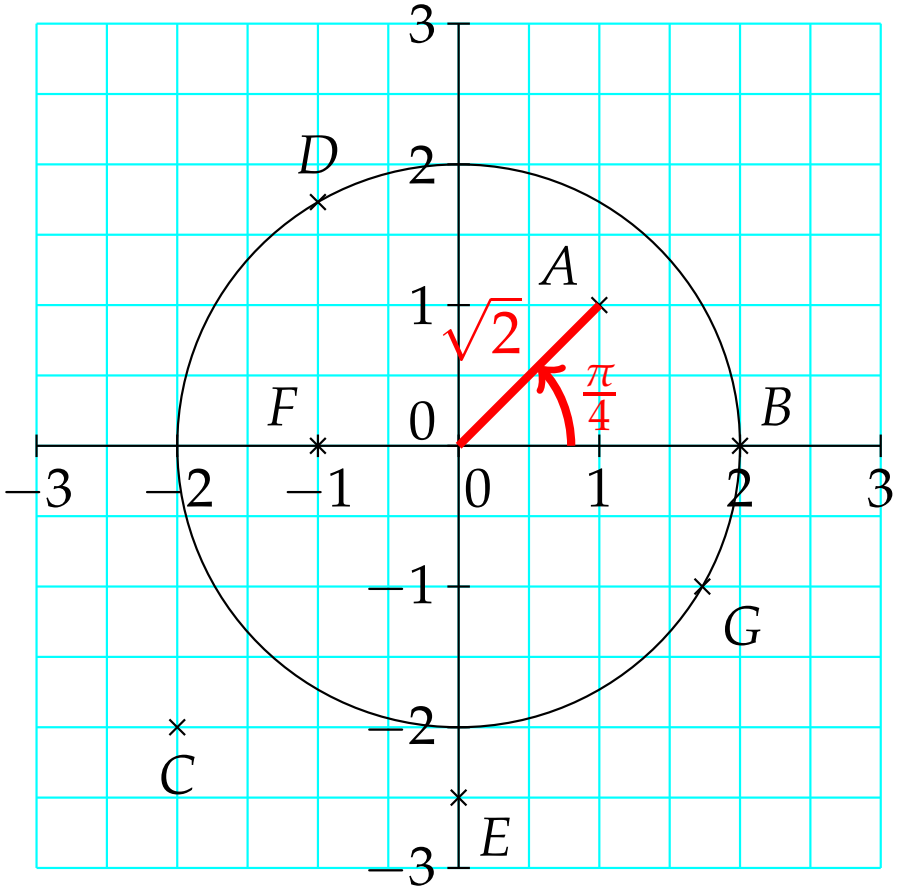
correction



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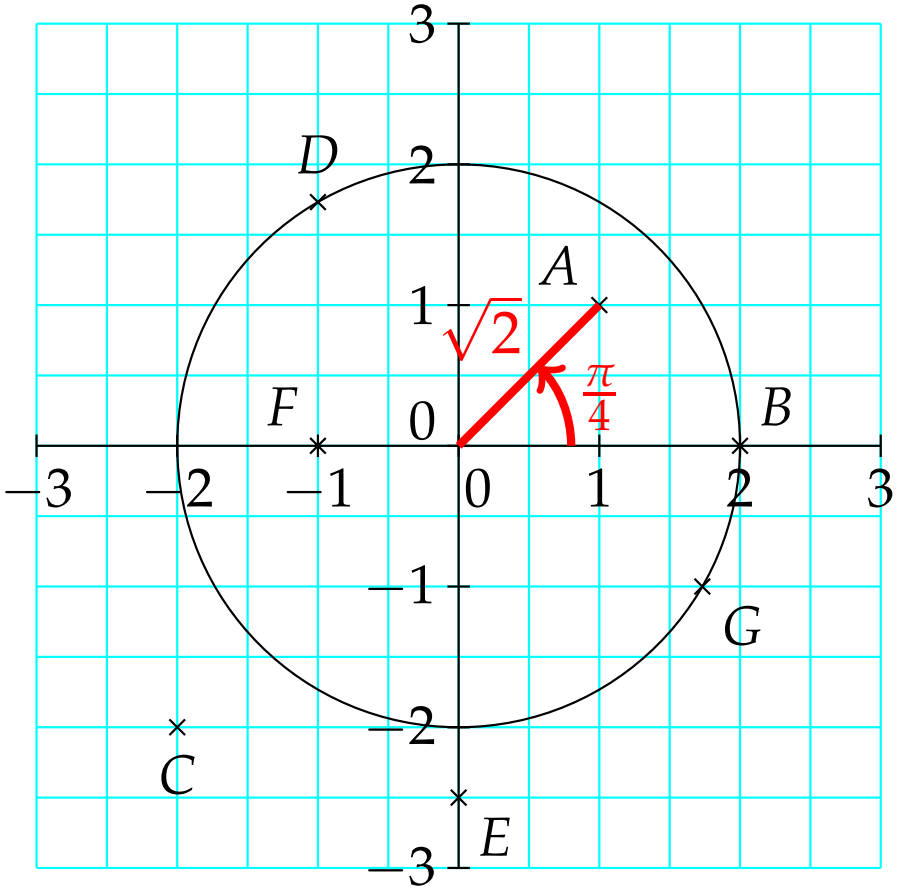
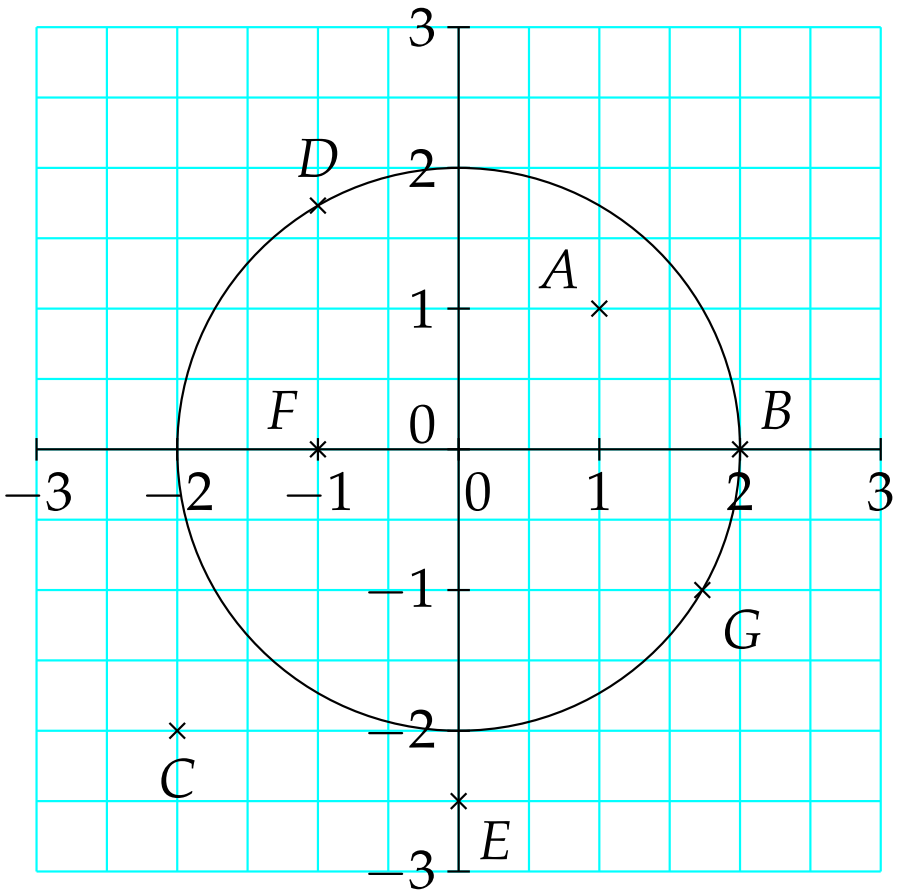
correction



Ainsi, le module de l'affixe de A est $|z_A| = \sqrt{2}$

et un argument de l'affixe de A est $arg(z_A) = \dfrac{\pi}{4}$

correction



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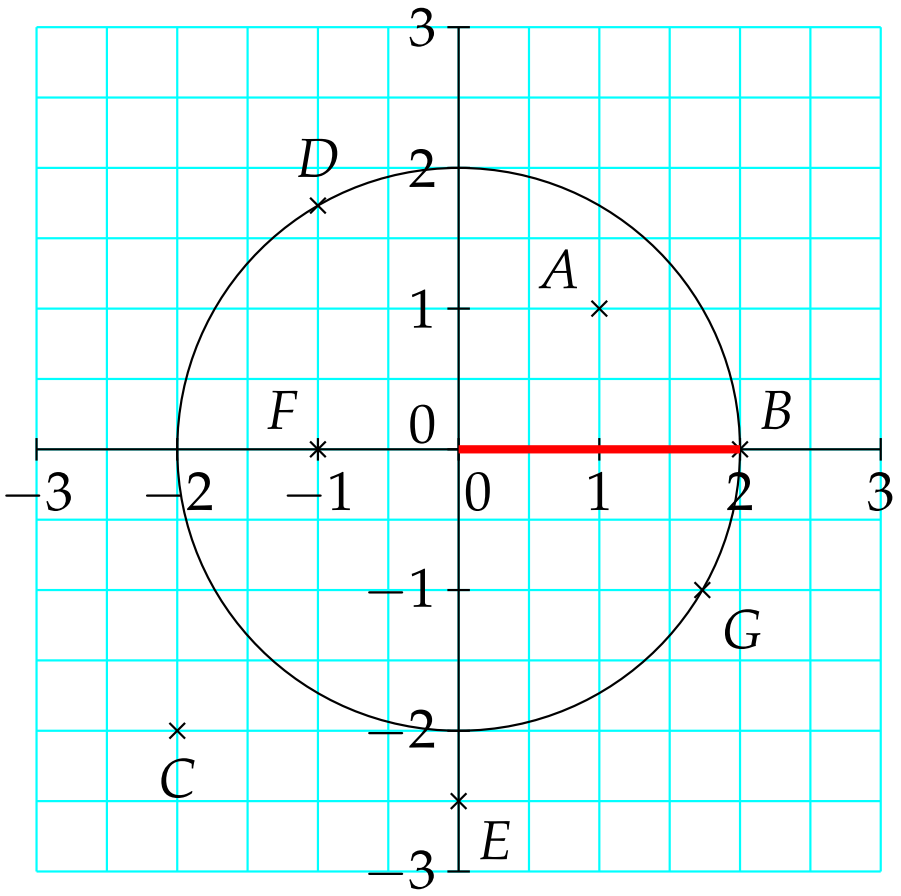

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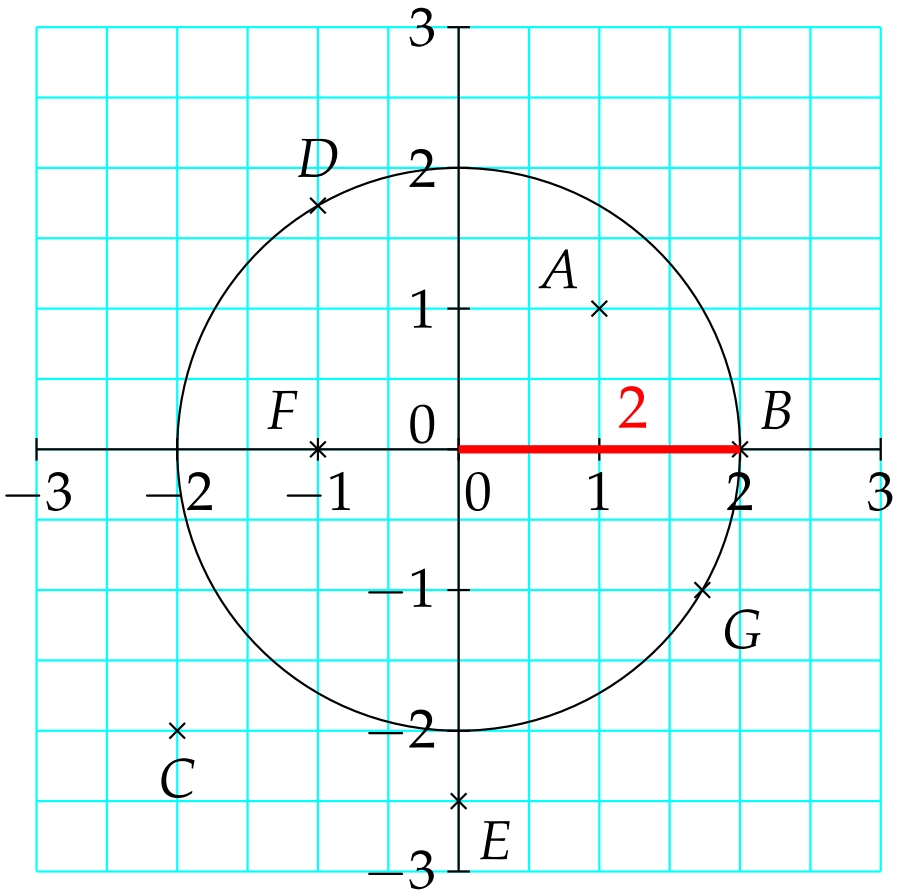

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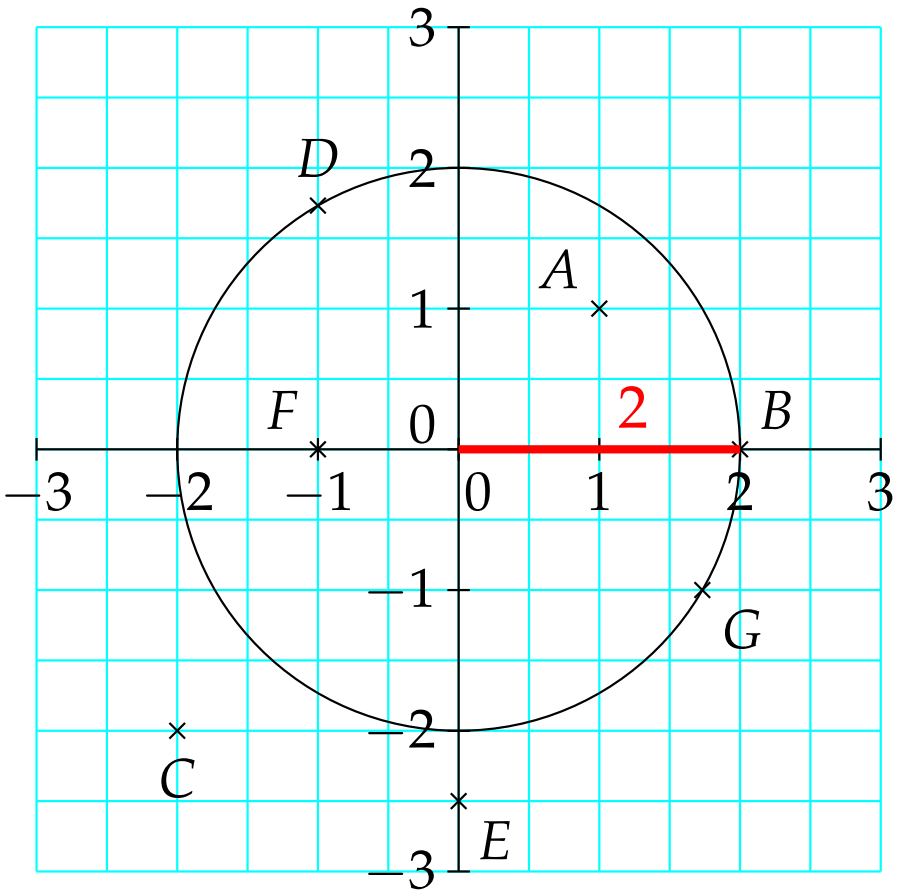
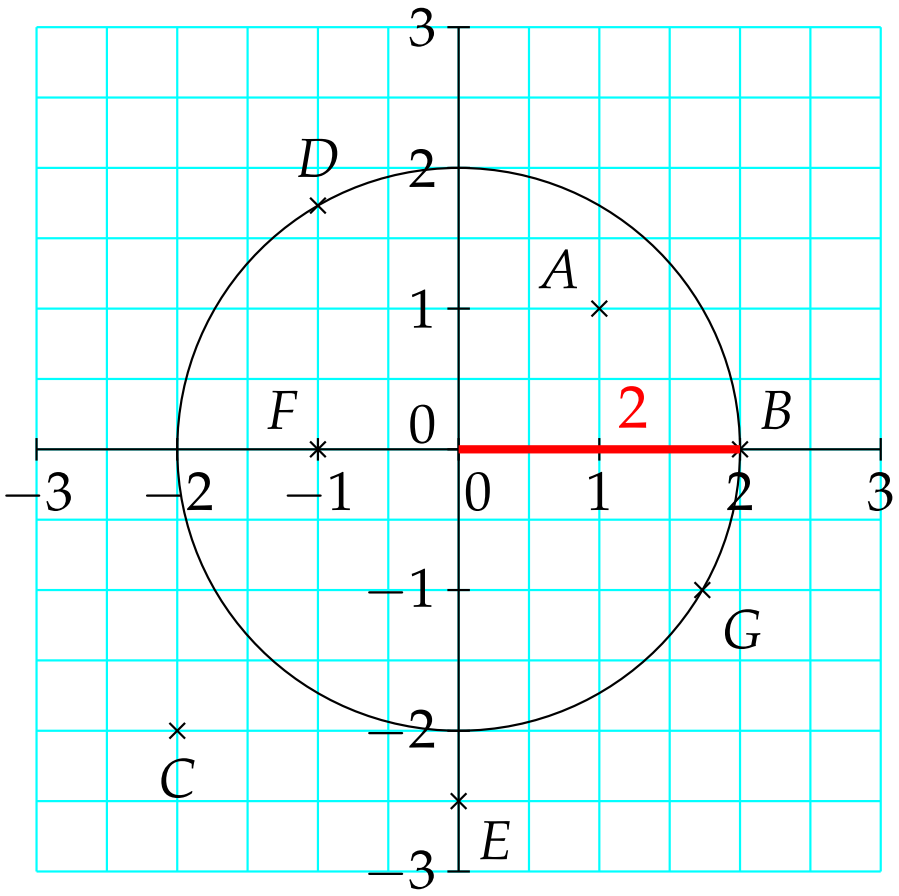


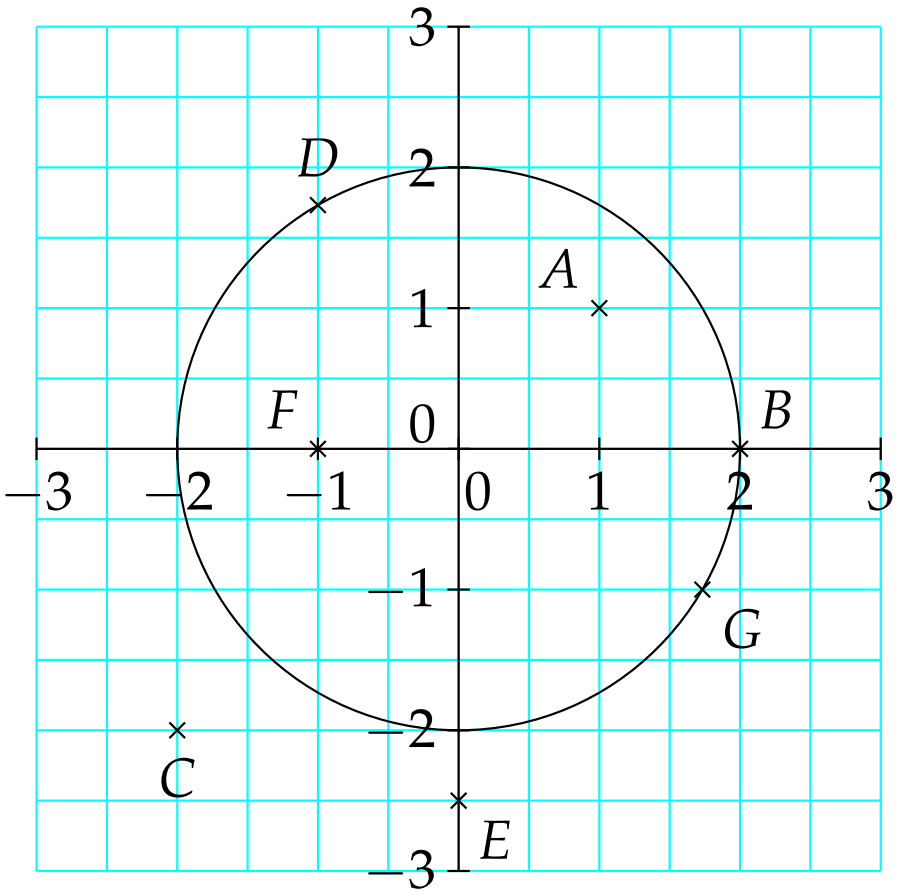
Ainsi, le module de l'affixe de B est $|z_B| = 2$

correction



Ainsi, le module de l'affixe de B est $|z_B| = 2$
et un argument de l'affixe de B est $arg(z_B) = 0$

correction



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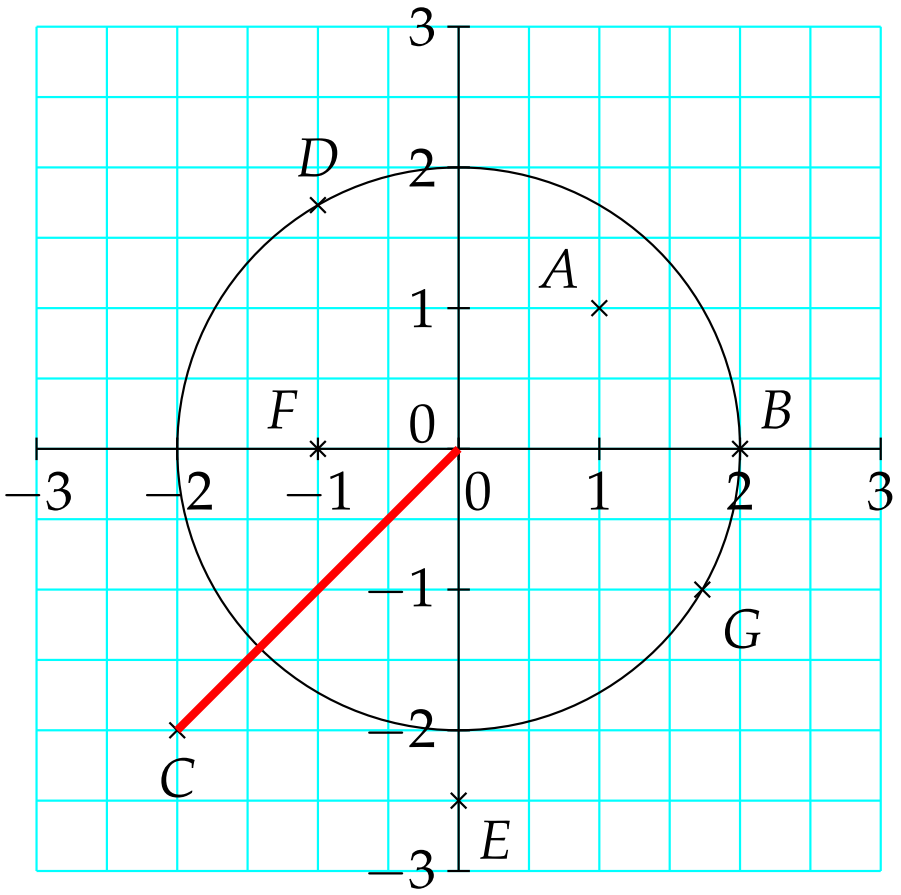

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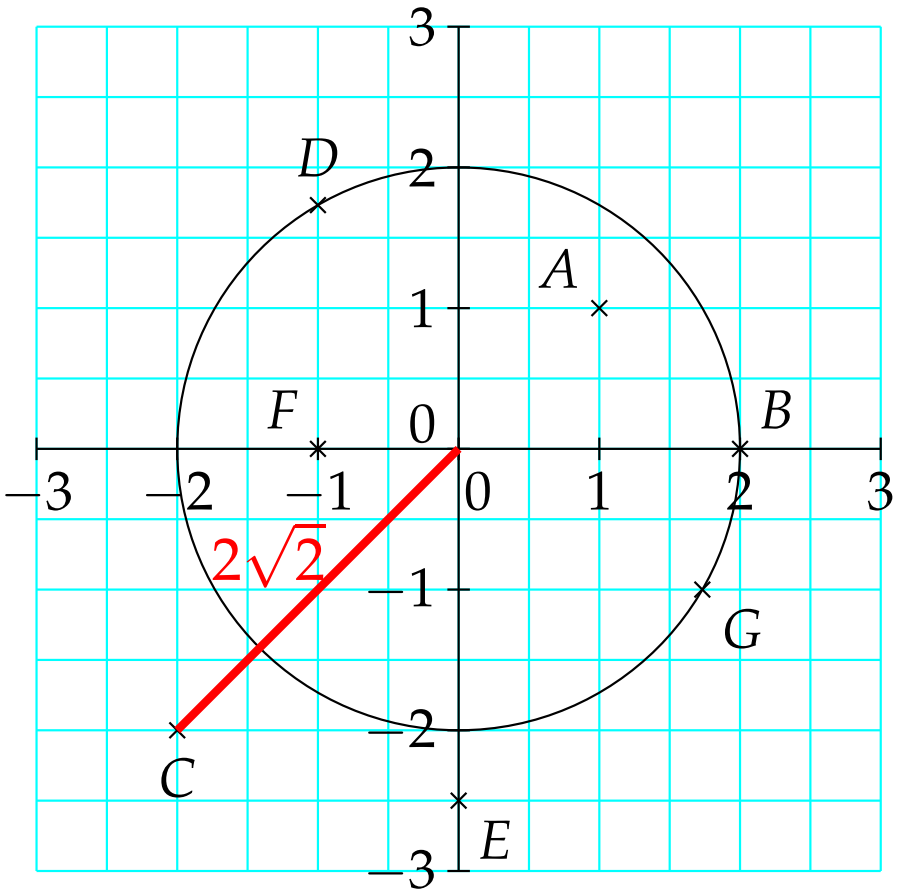

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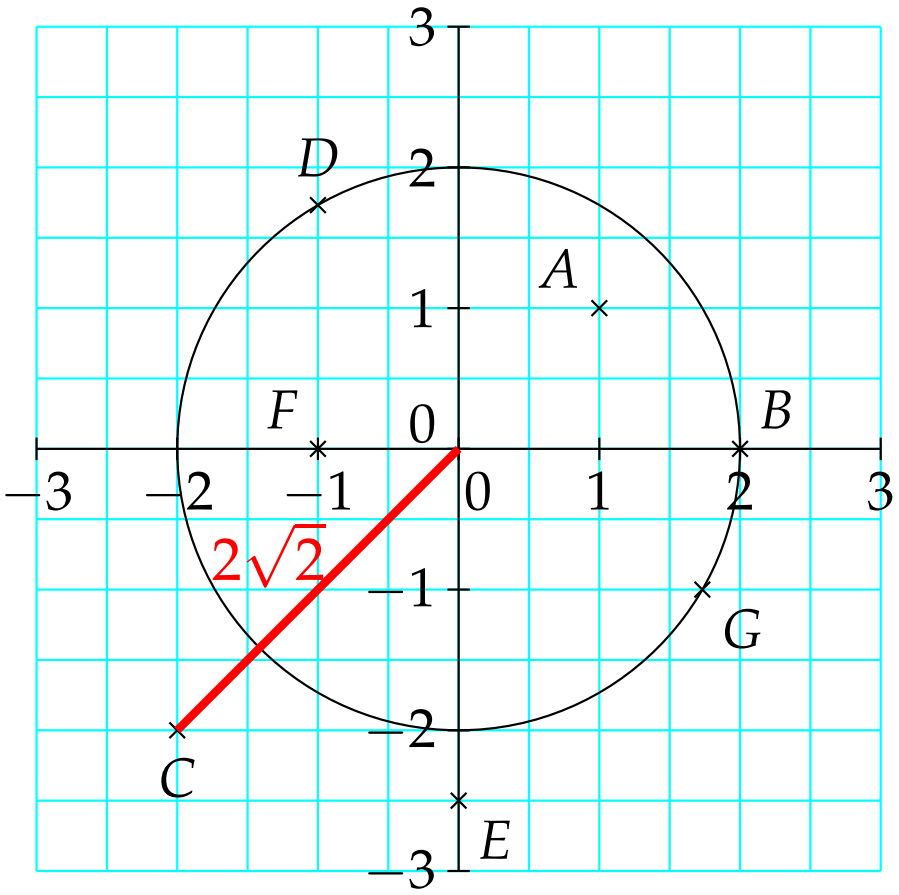
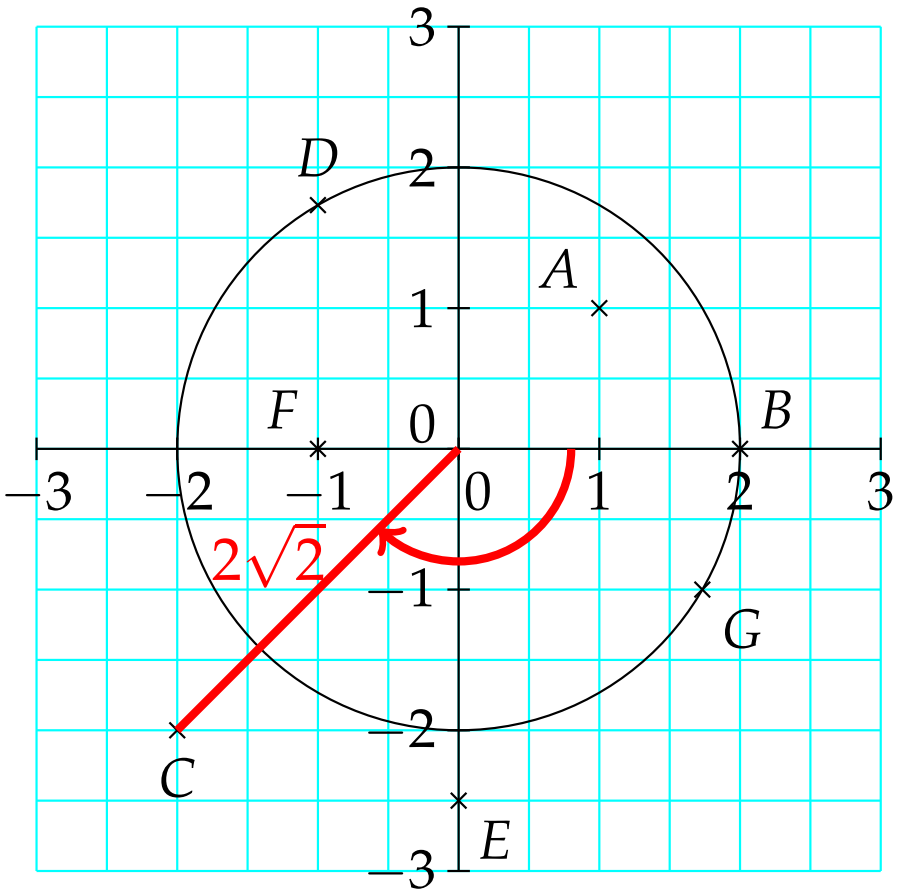


Ainsi, le module de l'affixe de C est $|z_C| = 2\sqrt{2}$

correction



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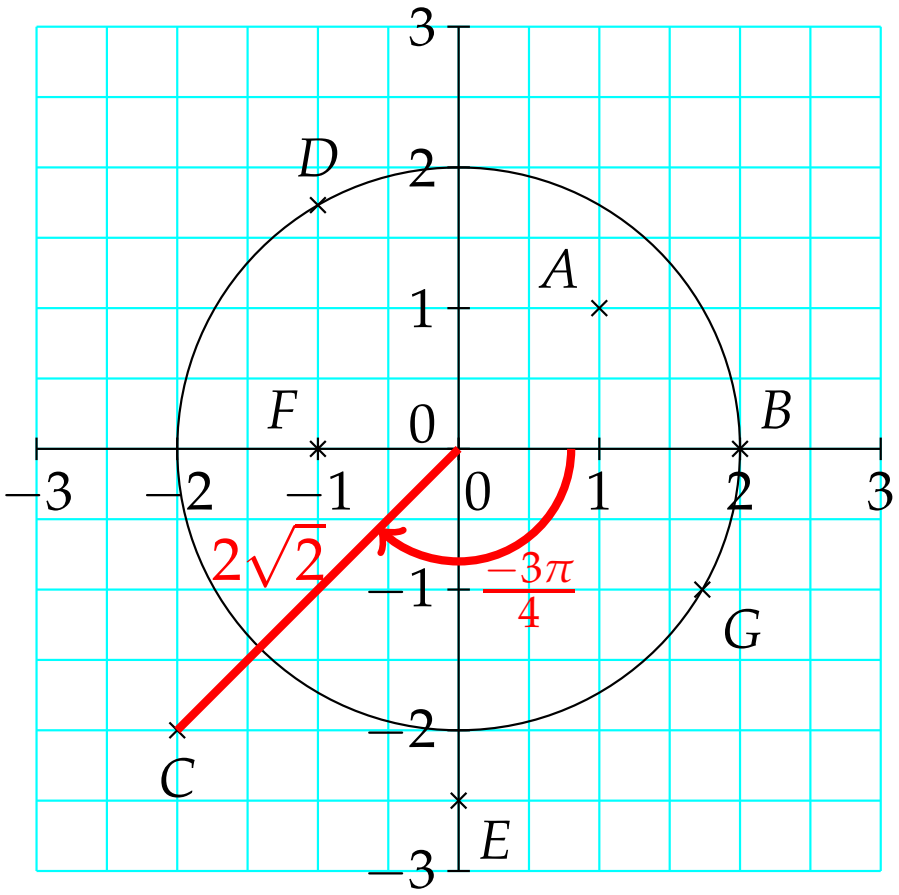
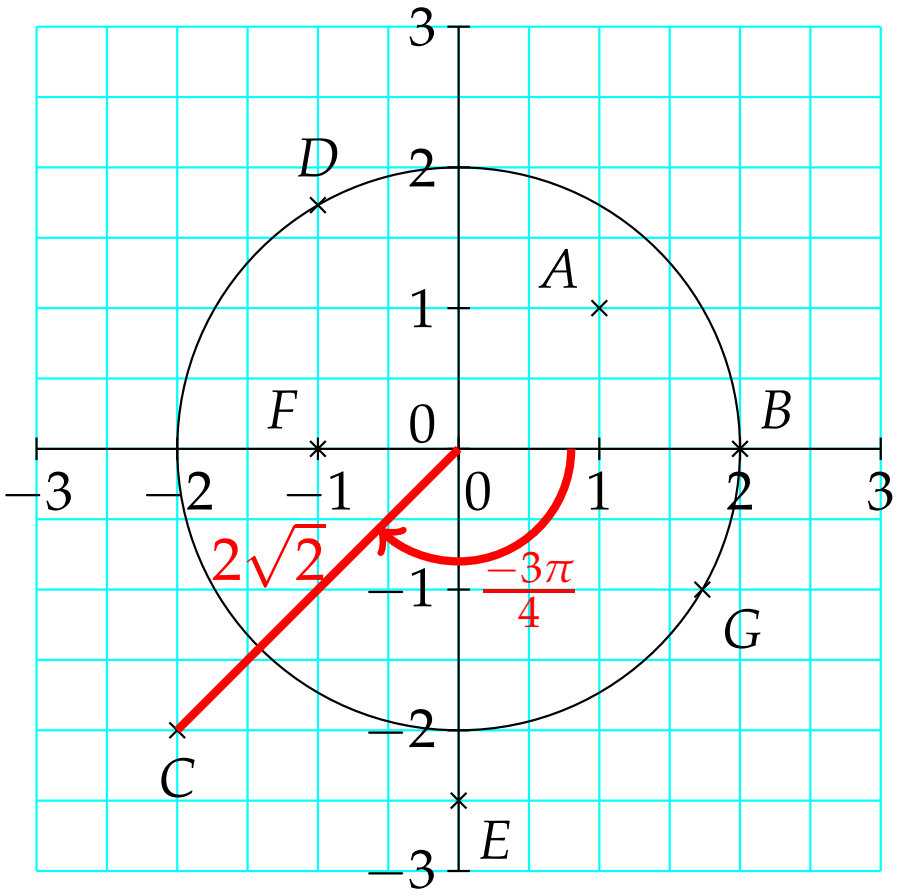
correction



Ainsi, le module de l'affixe de C est $|z_C| = 2\sqrt{2}$

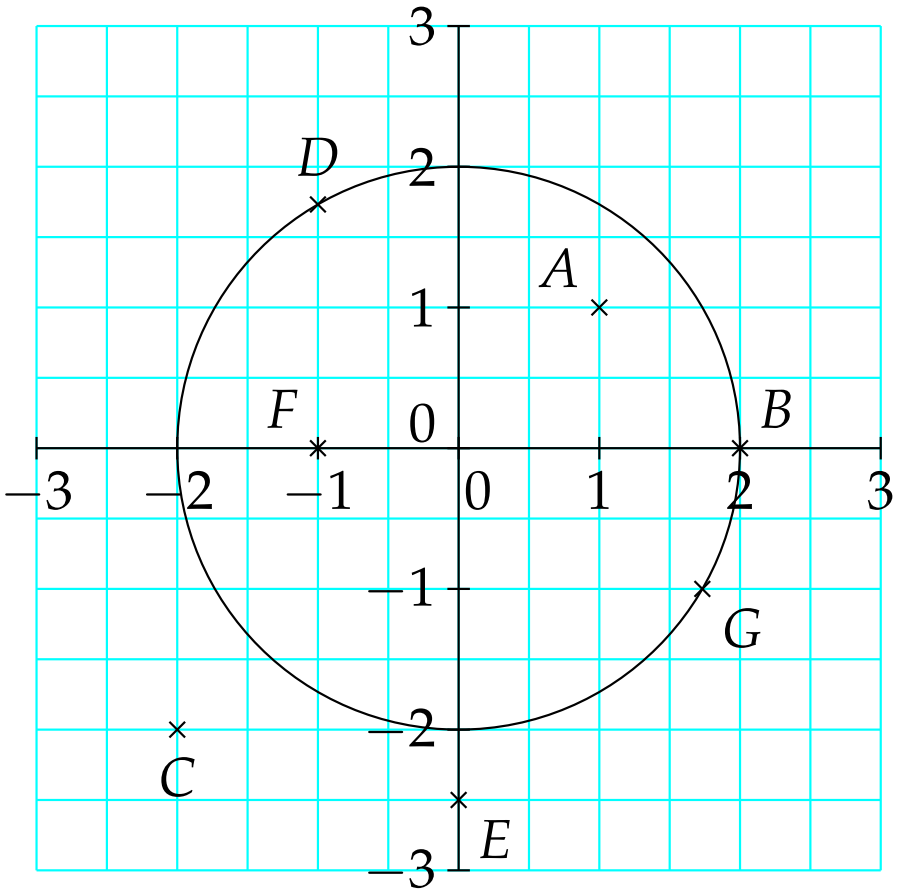
correction



Ainsi, le module de l'affixe de C est $|z_C| = 2\sqrt{2}$

et un argument de l'affixe de C est $arg(z_C) = -\frac{3\pi}{4}$

correction



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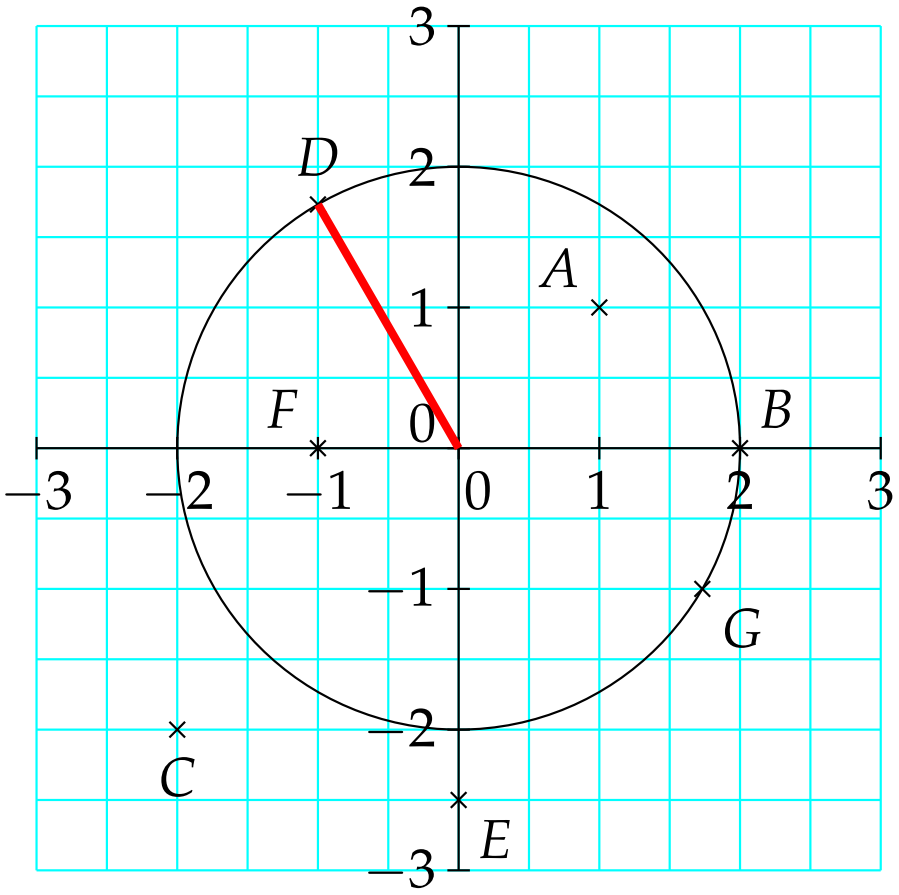

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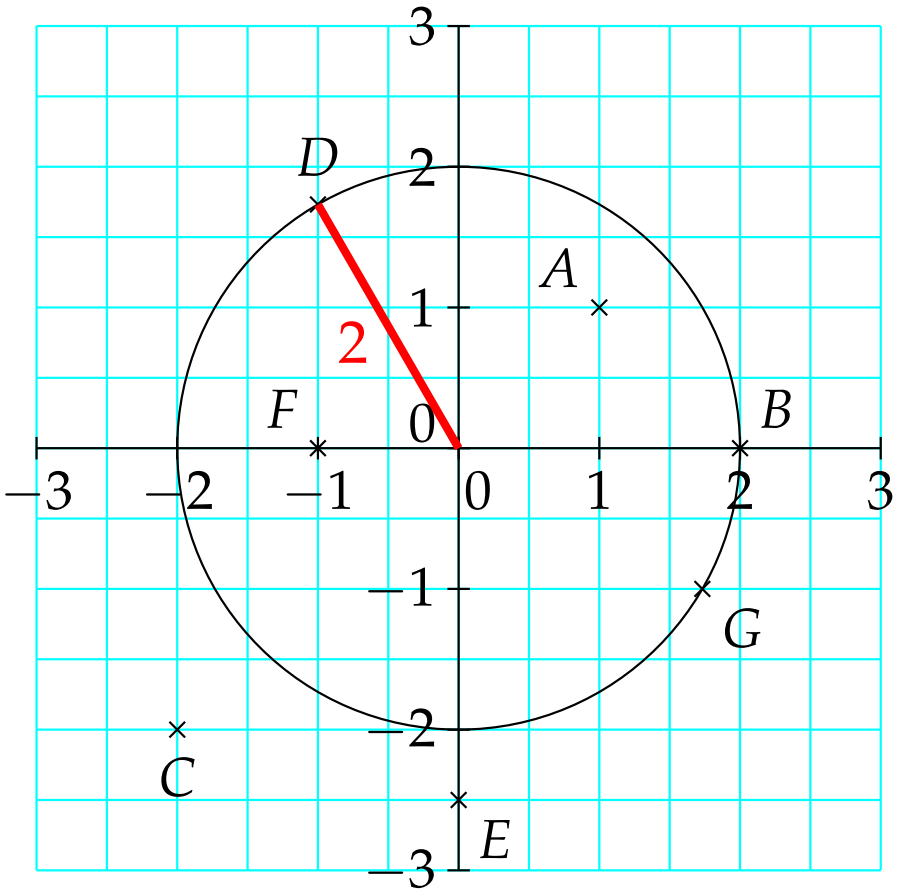

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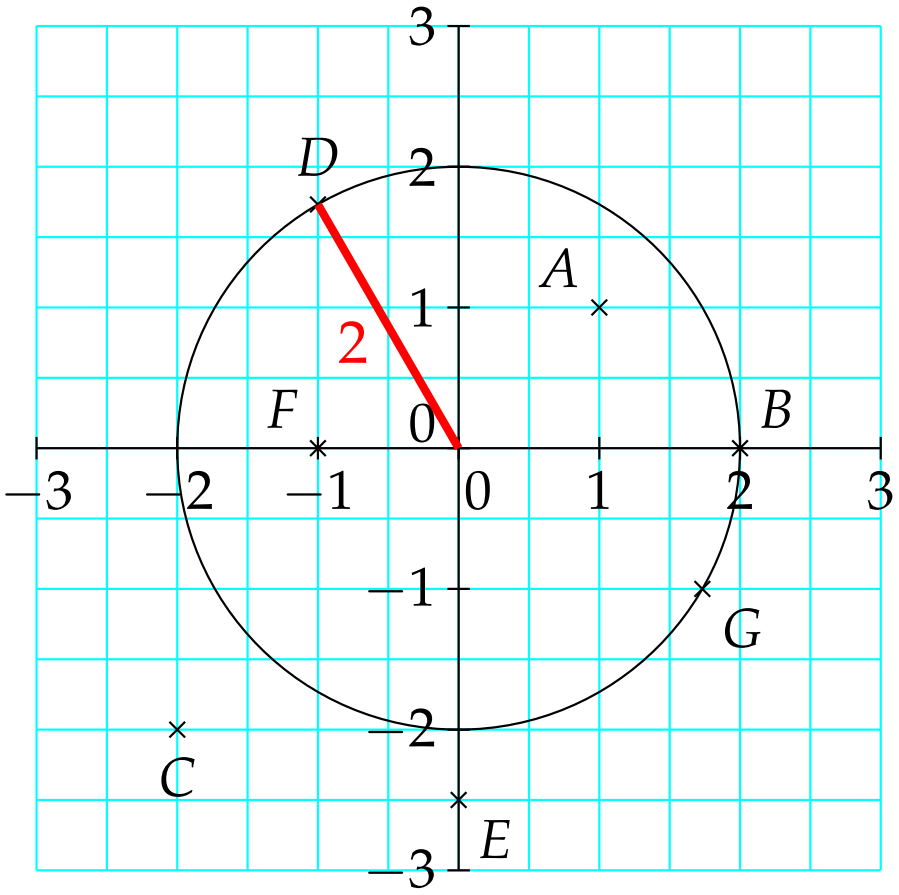
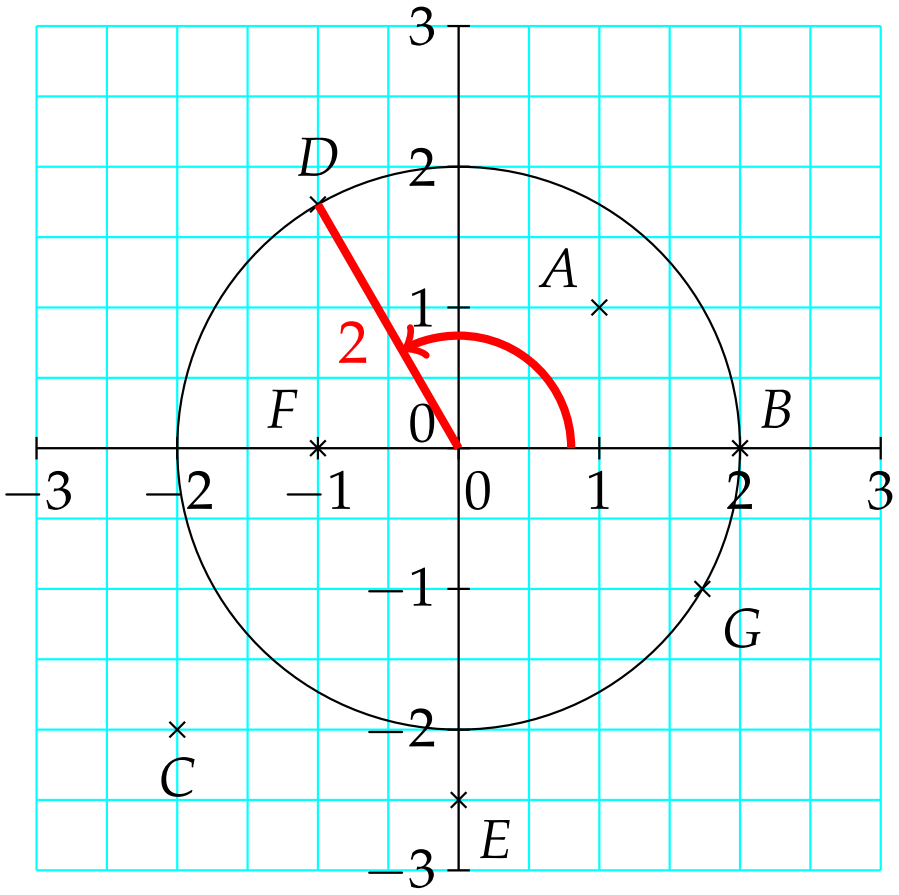


Ainsi, le module de l'affixe de D est $|z_D| = 2$

correction



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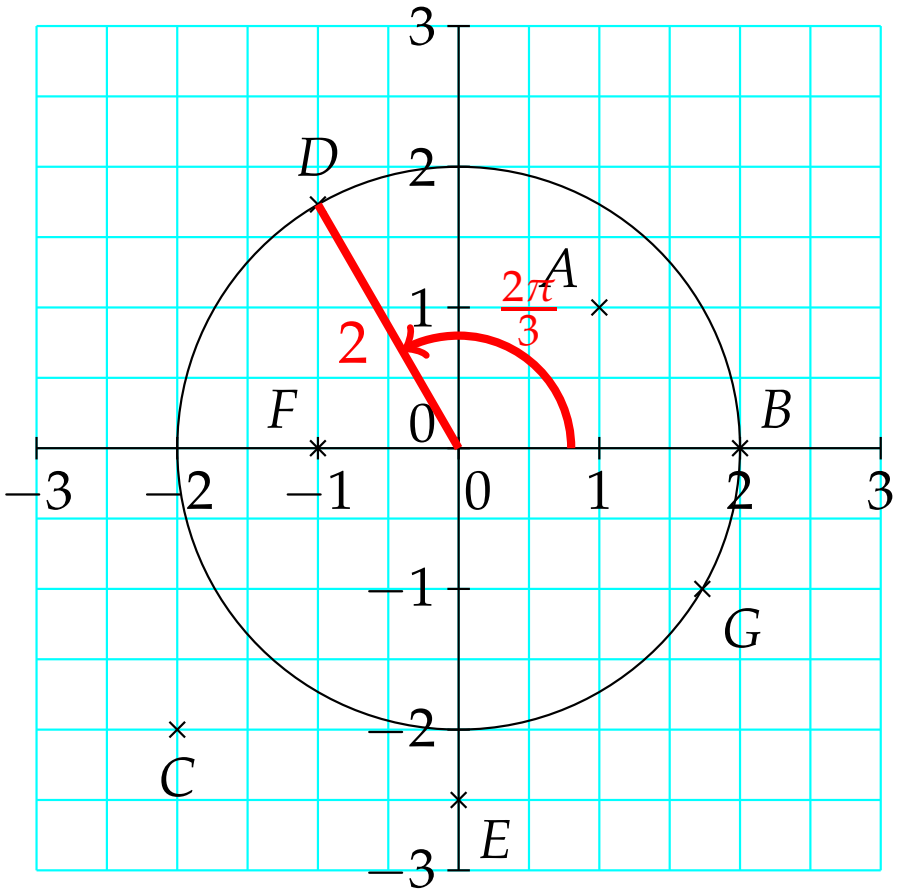
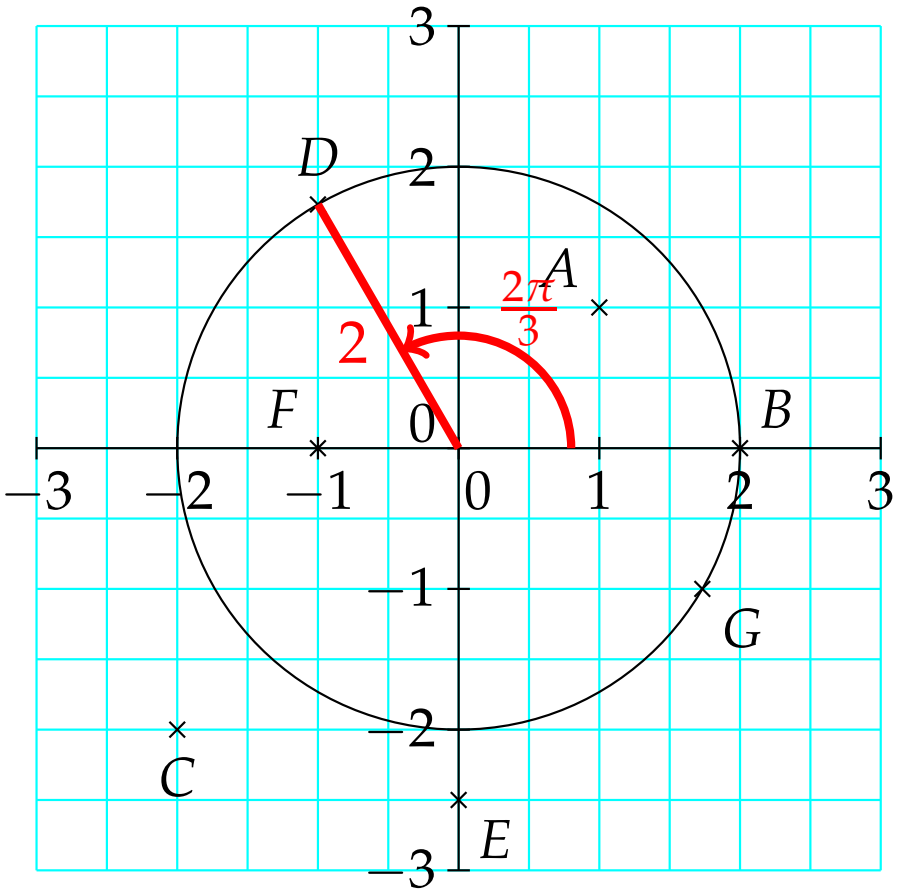
correction



Ainsi, le module de l'affixe de D est $|z_D| = 2$

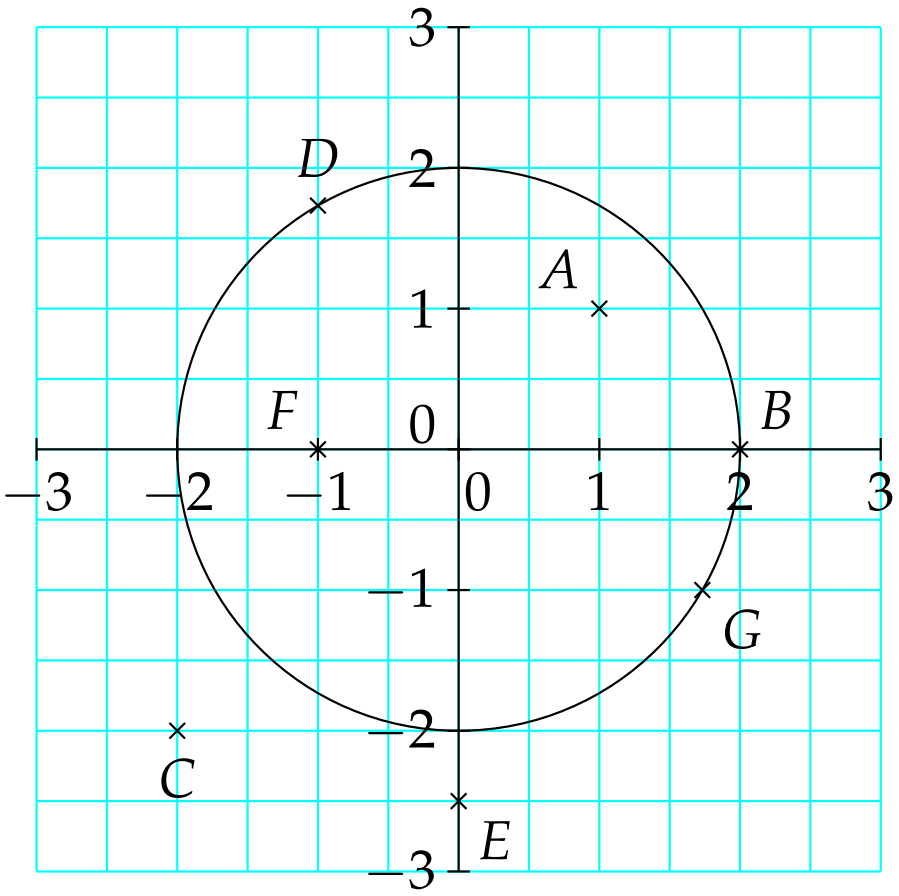
correction



Ainsi, le module de l'affixe de D est $|z_D| = 2$

et un argument de l'affixe de D est $arg(z_D) = \dfrac{2\pi}{3}$

correction



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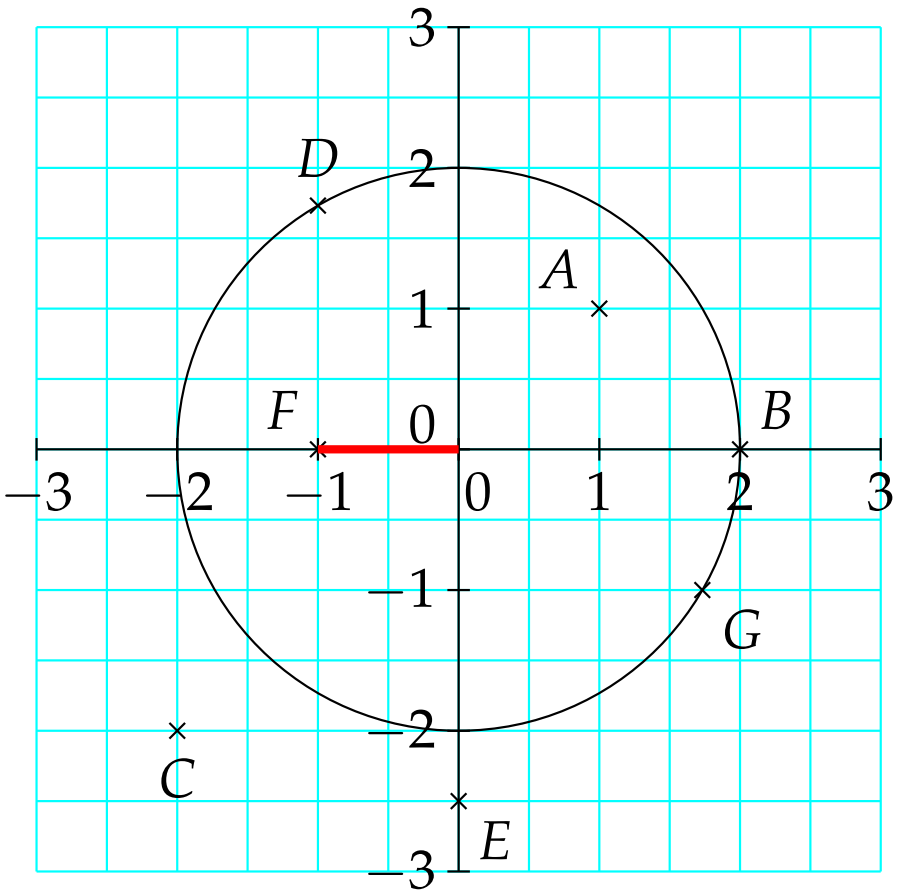

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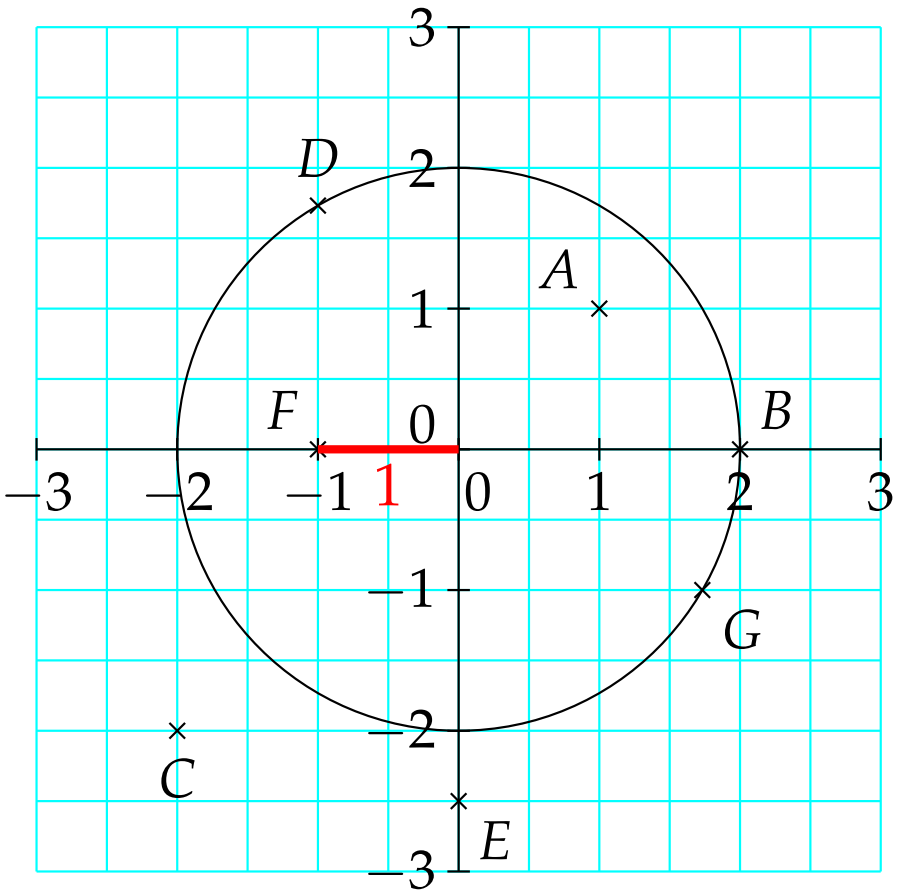

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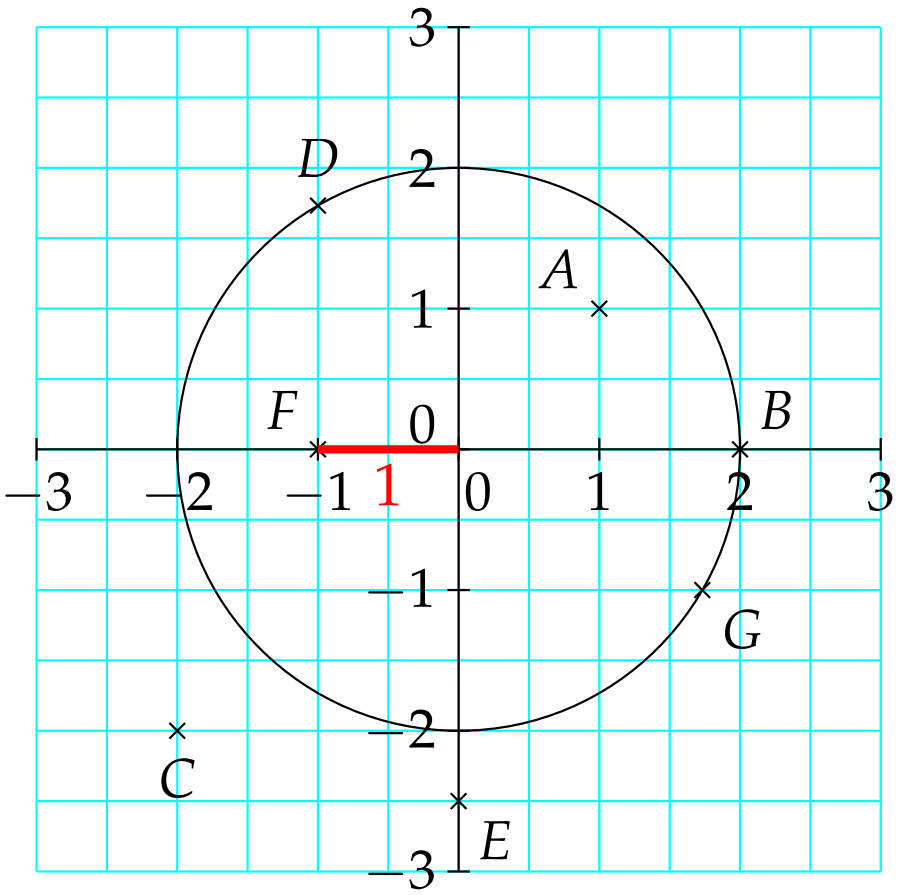
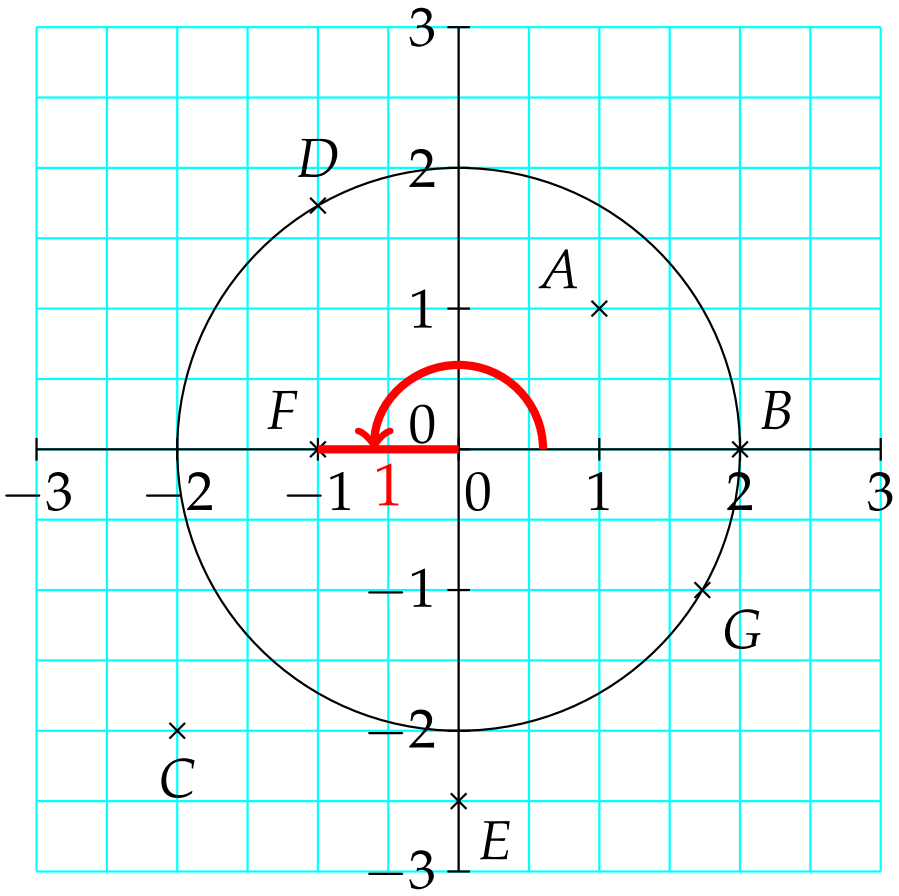


Ainsi, le module de l'affixe de F est $|z_F| = 1$

correction



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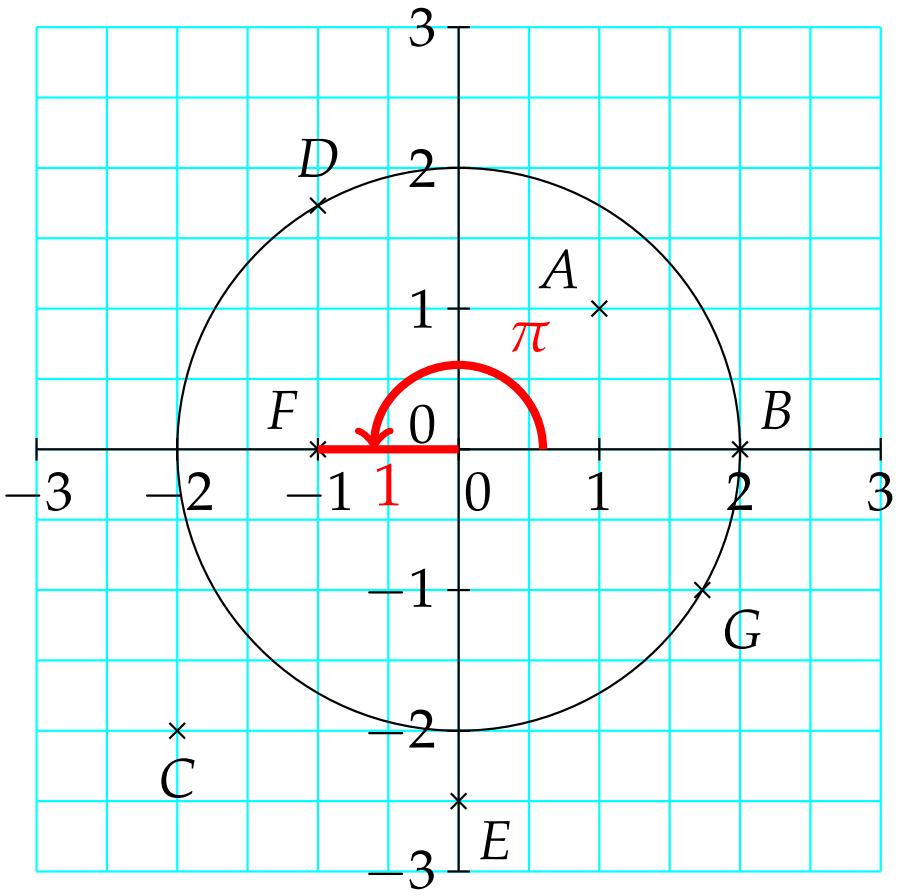
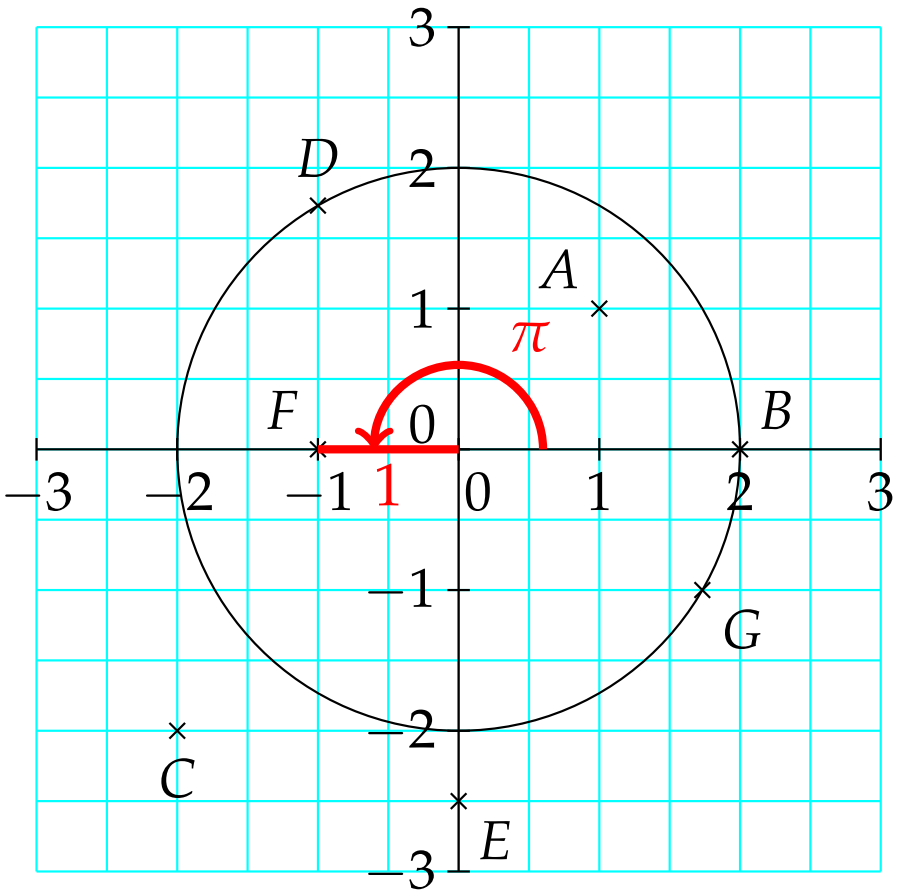
correction



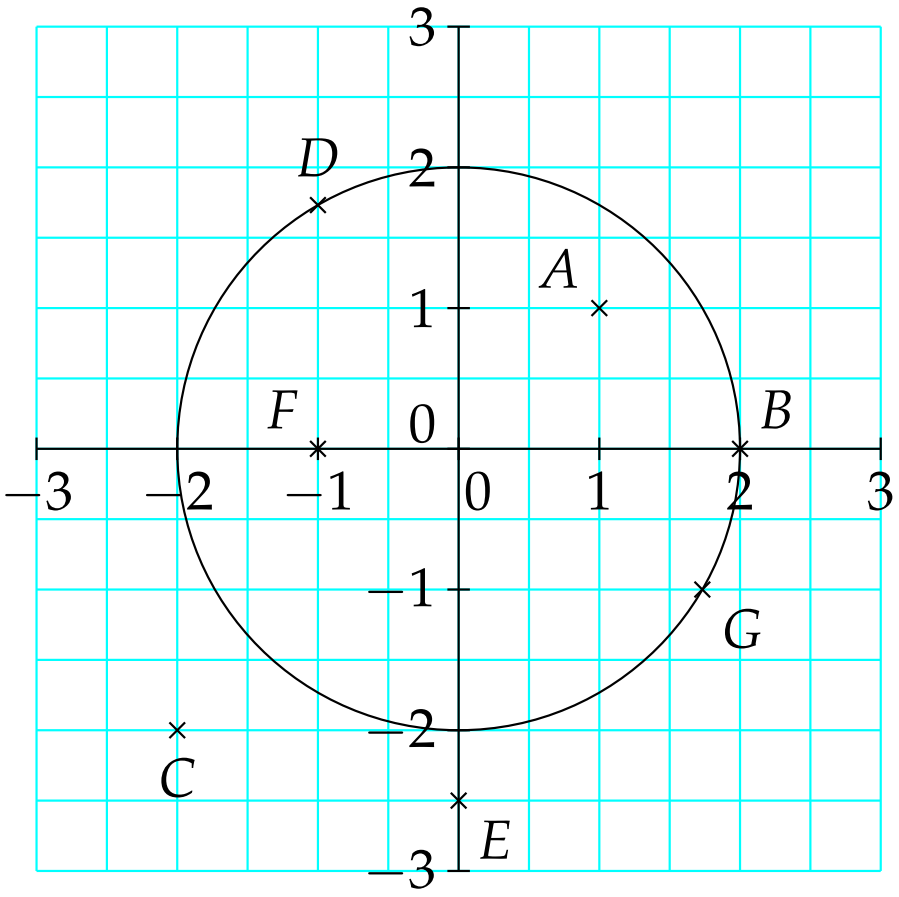
Ainsi, le module de l'affixe de F est $|z_F| = 1$

correction



Ainsi, le module de l'affixe de F est $|z_F| = 1$
et un argument de l'affixe de F est $arg(z_F) = \pi$

correction



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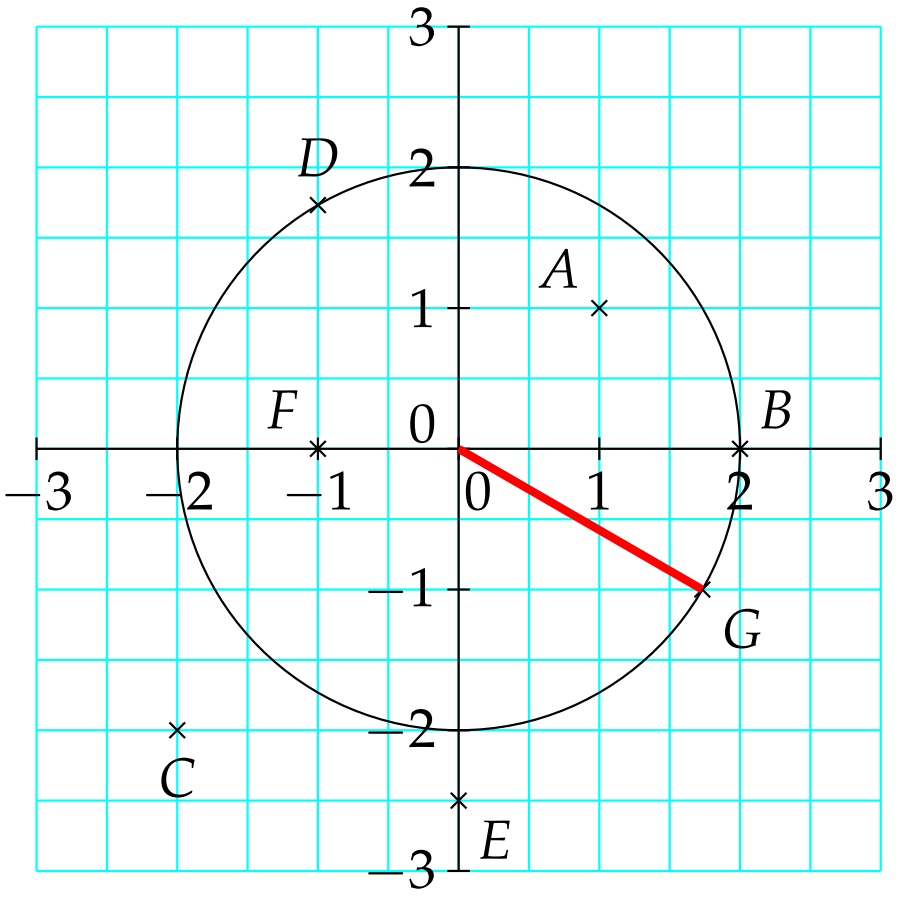

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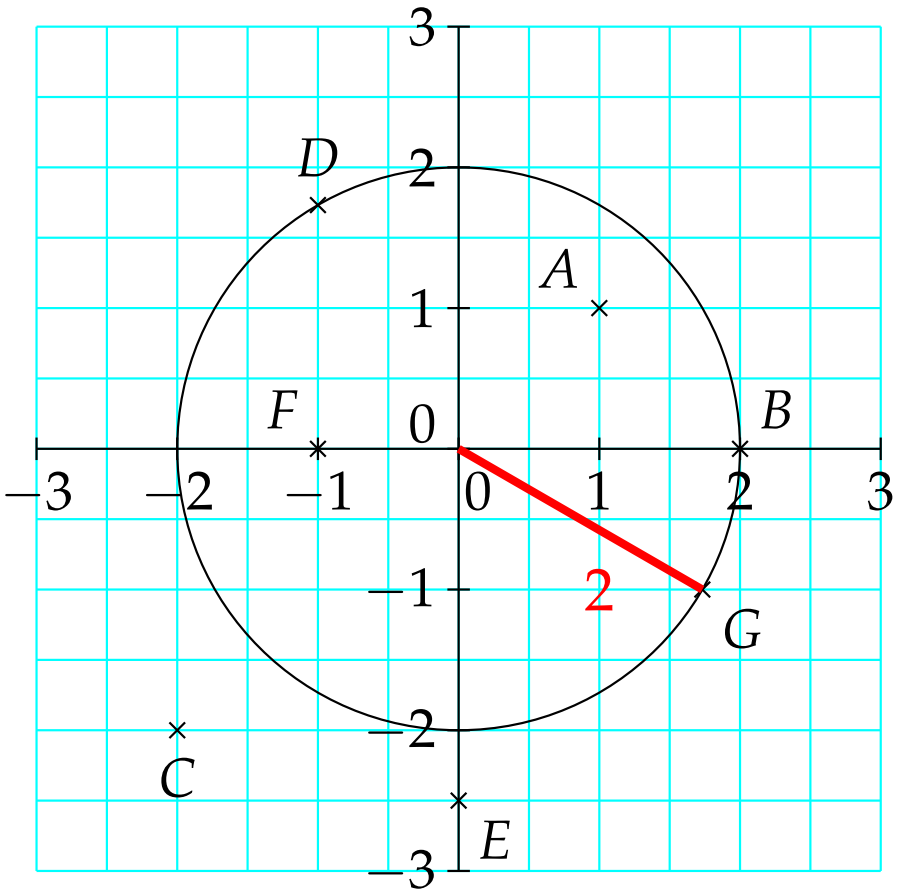

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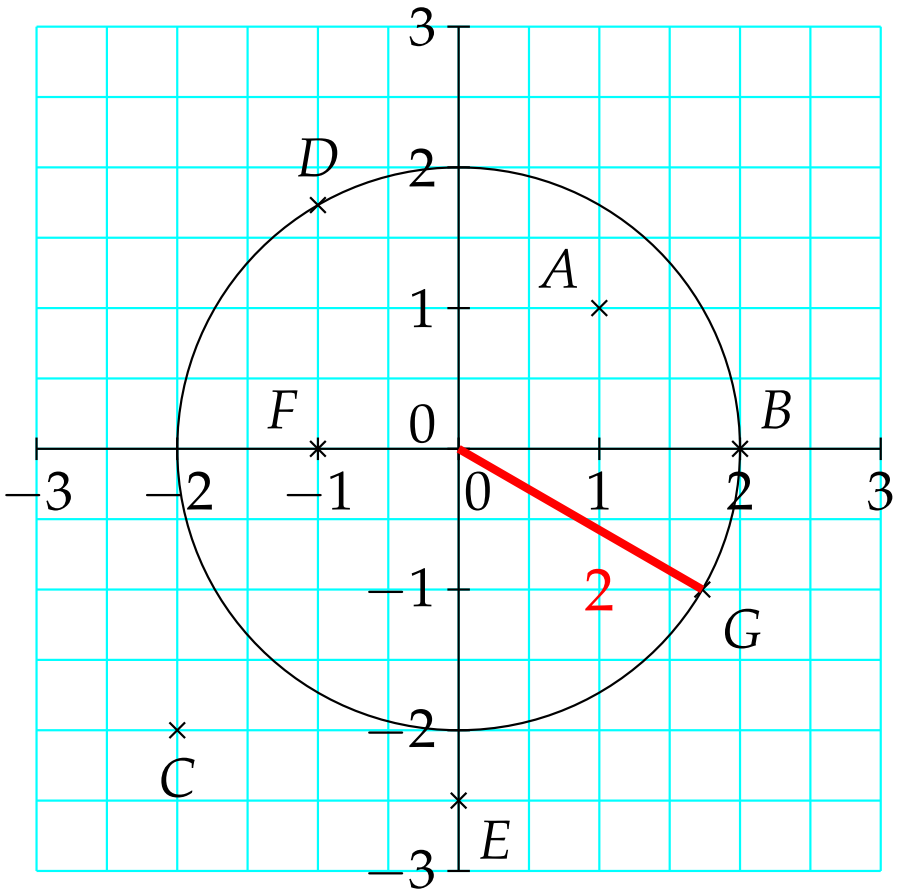
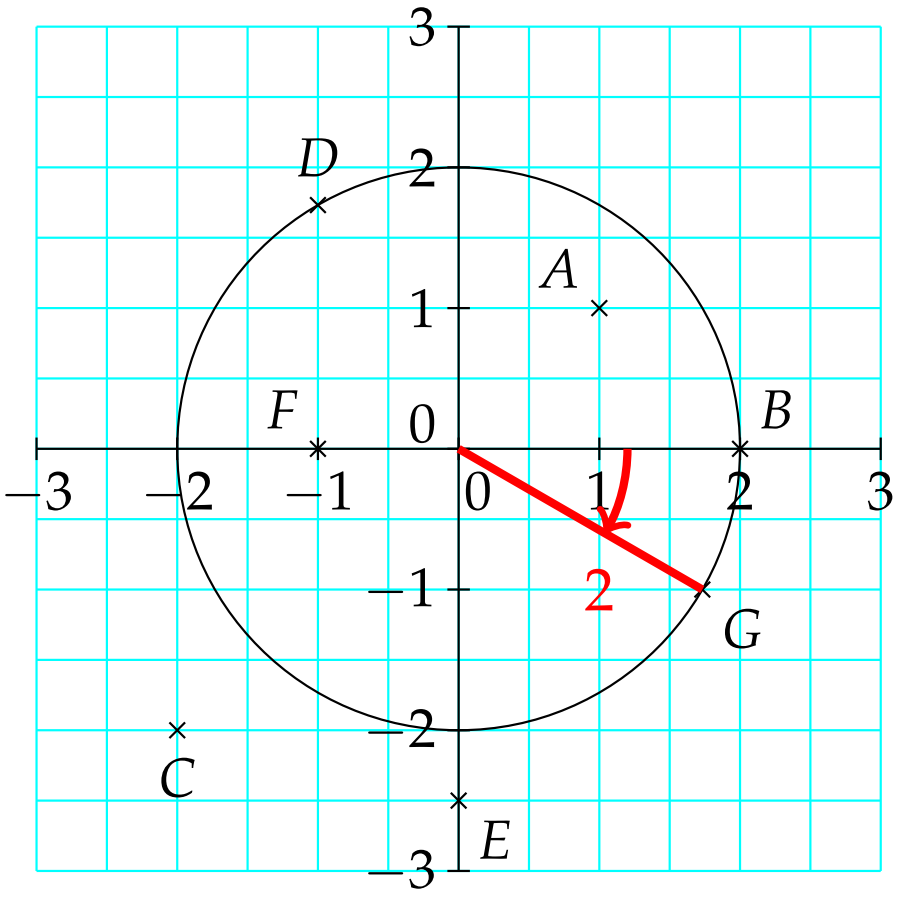


Ainsi, le module de l'affixe de G est $|z_G| = 2$

correction



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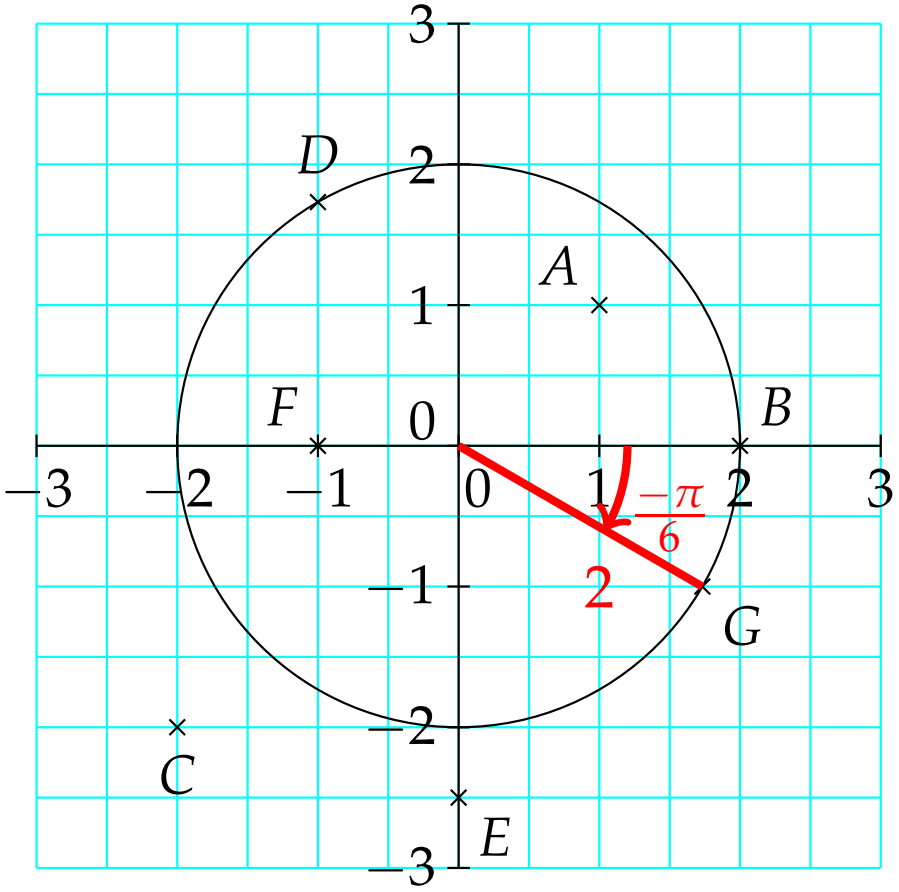
correction



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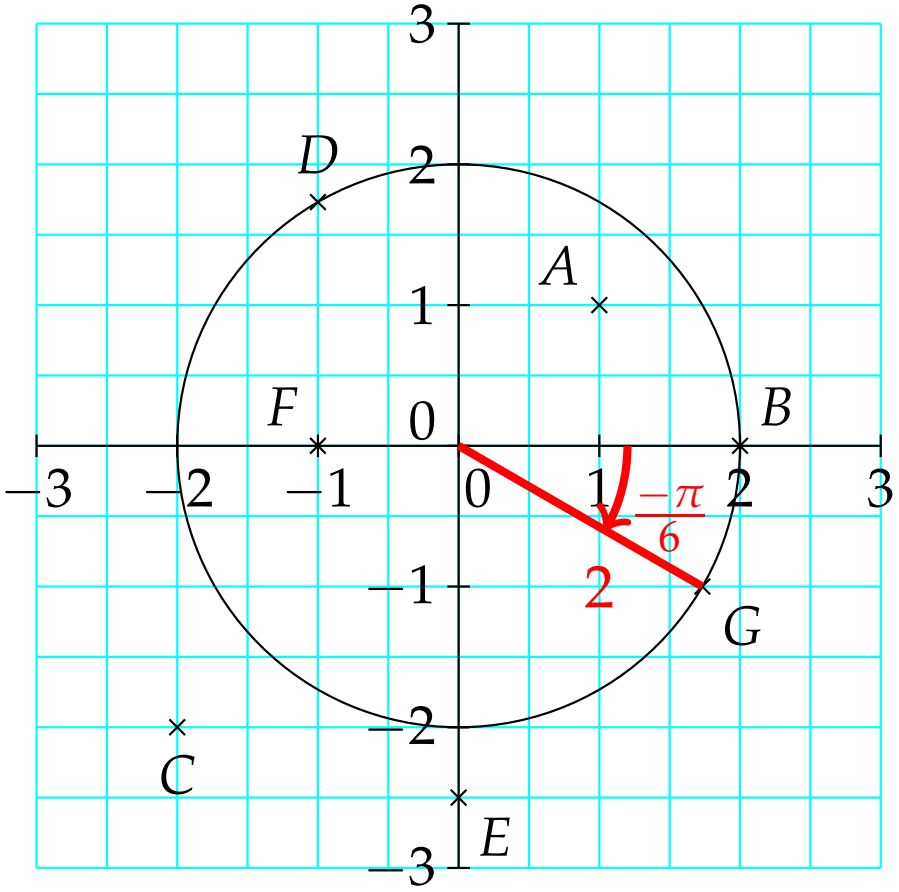
correction



Ainsi, le module de l'affixe de G est $|z_G| = 2$

et un argument de l'affixe de G est $arg(z_G) = -\dfrac{\pi}{6}$