

QCM d'autoévaluation, exercice 58 page 45

Sésamath

Maths TS spécialité



On a $\text{PGCD}(25\,176, 42\,722) = 2$.

Combien de divisions, à l'aide de l'algorithme d'Euclide, sont-elles nécessaires jusqu'à obtenir un reste nul ?

- a) 12
- b) 11
- c) 10
- d) 9

On a :

$$42722 = 25176 \times 1 + 17546$$

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$$2286 = 772 \times 2 + 742$$

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$$772 = 742 \times 1 + 30$$

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$$742 = 30 \times 24 + 22$$

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$$742 = 30 \times 24 + 22$$

$$30 = 22 \times 1 + 8$$

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$$22 = 8 \times 2 + 6$$

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$$6 = 2 \times 3 + 0$$

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On a donc effectué 11 divisions à l'aide de l'algorithme d'Euclide jusqu'à obtenir un reste nul :

réponse **b)**