

NOM:

Classe:

Prénom:

Groupe:

TEST N°04

Exercice 1 :

1- Donner les trois identités remarquables

$$(a+b)^2 =$$

$$(a-b)^2 =$$

$$(a-b)(a+b) =$$

2- Compléter le formulaire suivant

$$e^{x+y} =$$

$$e^0 =$$

$$e^{-x}$$

$$e^1 = \approx$$

$$e^{x-y}$$

$$e^{xy} =$$

$$e^{-1} \approx$$

$$a > 0, b > 0, \ln(ab) =$$

$$a > 0, b > 0, \ln\left(\frac{a}{b}\right) =$$

$$\forall x \in \mathbb{R} \text{ et } a > 0, \ln(a^x) =$$

$$b > 0, \ln\left(\frac{1}{b}\right) =$$

$$\ln \dots = 0$$

$$\ln \dots = 1$$

$$\ln(2) \approx$$

$$\ln(3) \approx$$

$$\forall x \in \mathbb{R}, \ln(e^x) =$$

$$\forall x \in \mathbb{R}_+, e^{\ln(x)} =$$

Exercice 2

Calculer les nombres suivants :

$$A = \frac{1}{3} + \frac{1}{6} + \frac{1}{9} =$$

$$B = 1 - 0,234 =$$

$$C = \frac{44}{36} \times \frac{63}{55} =$$

$$D = e^{-2\ln(4)} =$$

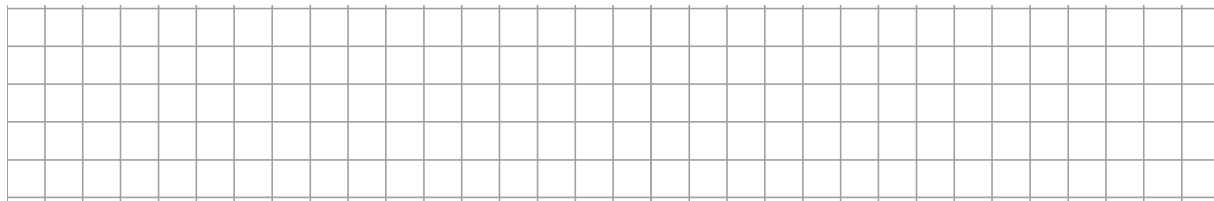
$$E = 3\ln(2) - \ln(4) =$$

$$F = e^{3\ln(2) - \ln(4) + 1} =$$

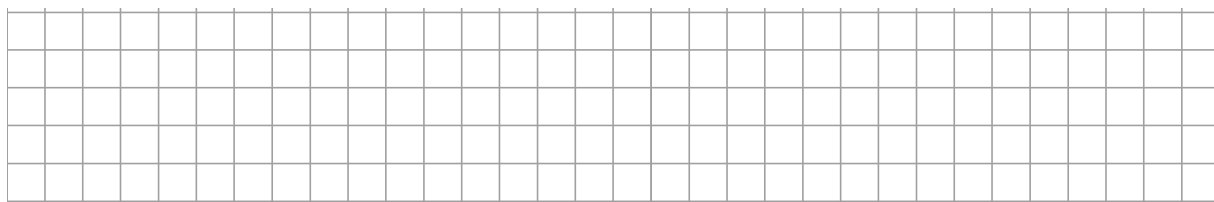
Exercice 3 :

Factoriser les expressions suivantes

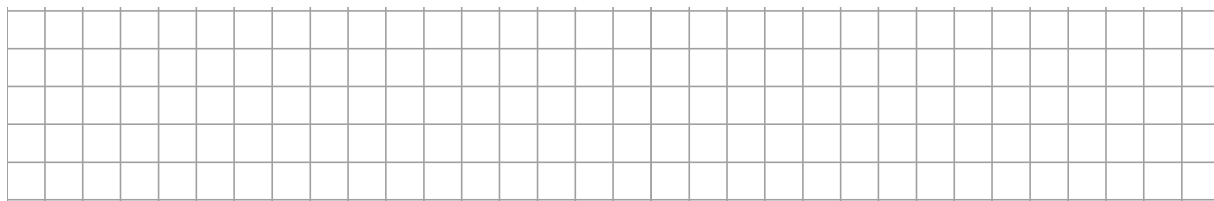
$$A(x) = (x+1)(x-2) - 3(x+1)^2$$



$$B(x) = 3xe^{-x} - e^{-x}$$



$$C(x) = x^2 - 1$$

**Exercice 4 :**Développer $D(x)$

$$D(x) = (e^x + e^{-x})^2$$

