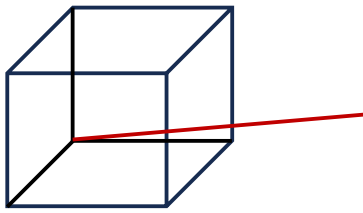


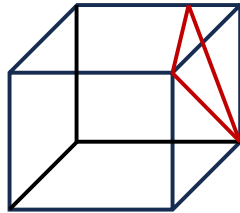
Corrigé type

**Exercice N°1 : 4,5 Pts**



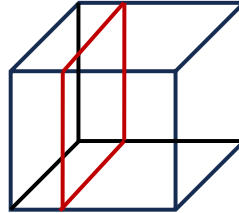
$[-21-1]$

**1Pt**



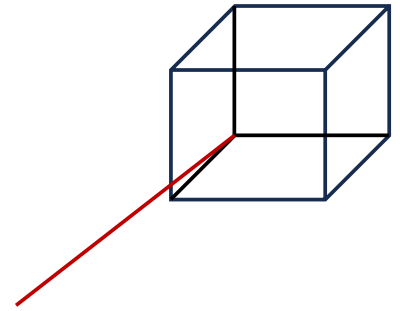
$(1-3-1)$

**1,5Pt**



$(030)$

**1Pt**



$[1-1-1]$

**1Pt**

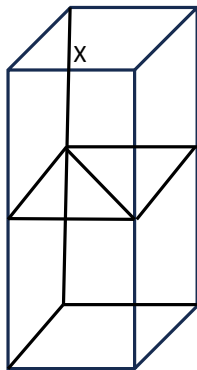
**Exercice N°2 : 10 Pts**

1- A, B, C : Sites tétraédriques. D : Site octaédrique **0,5 Pt par site (0,5Pt x 4)**

2- A :  $(1/3 \ 2/3 \ 7/8)$  ou  $(2/3 \ 1/3 \ 7/8)$  B :  $(0 \ 0 \ 3/8)$

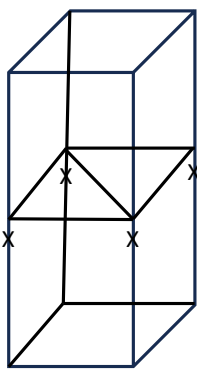
C :  $(1/4 \ 1/4 \ 1/4)$  D :  $(1/2 \ 1/2 \ 1/2)$ . **0,5 Pt par coordonnée (0,5Pt x 4)**

3- Position dans la maille



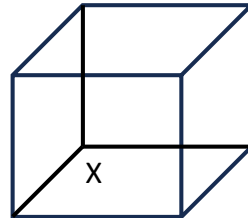
A

**0,5 Pt**



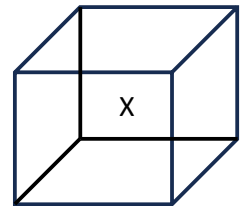
B

**0,5 Pt**



C

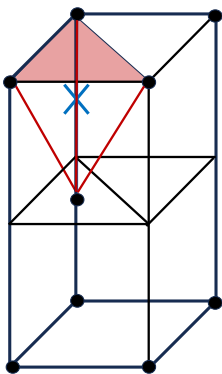
**0,5 Pt**



D

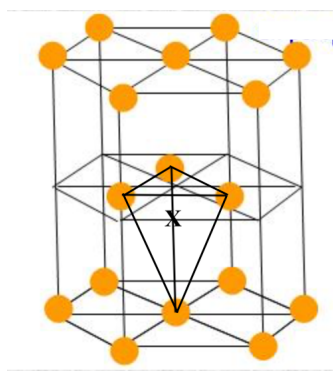
**0,5 Pt**

4 – Représentation des polyèdres :



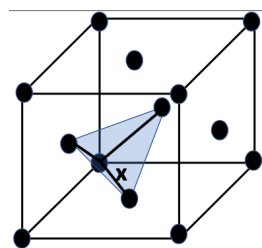
A

**1 Pt**



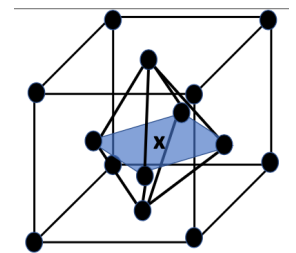
B

**1 Pt**



C

**1 Pt**

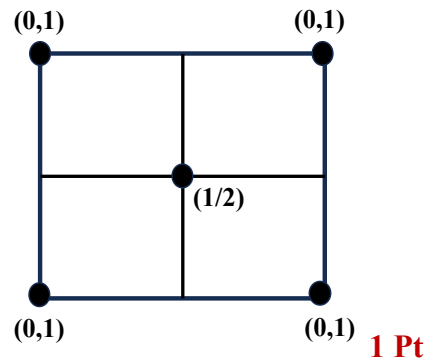


D

**1 Pt**

**Exercice N°3 : 5,5 Pts**

- 1- (000), (1/21/21/2) **0,5 Pt**
- 2- Empilement ABAB... disposition carrée **0,5 Pt**
- 3- Projection de la maille



4- Coordinence 8 à  $a \frac{\sqrt{3}}{2}$  **1 Pt**

5-  $2R = a \frac{\sqrt{3}}{2}$   $R = 1.53 \text{ \AA}$  **1 Pt**

6-  $\rho = \frac{MZ}{NV}$   $\rho = 17.97 \text{ g/cm}^3$  **1 Pt**  $Z = 8 \times 1/8 + 1 = 2.$  **0,5 Pt**