

$$a) \overrightarrow{BD} + \overrightarrow{DA} = \overrightarrow{BA} : \text{relation de Chasles}$$

$$b) \overrightarrow{BD} + \overrightarrow{AA} = \overrightarrow{BD} + \overrightarrow{0} = \overrightarrow{BD}$$

$\overrightarrow{0}$  le vecteur nul est réduit à un point

$$c) \overrightarrow{BD} + \overrightarrow{DB} = \overrightarrow{BB} : \text{relation de Chasles}$$

$$d) \overrightarrow{BD} - \overrightarrow{BA} = \overrightarrow{BD} + (-\overrightarrow{BA}) = \overrightarrow{BD} + \overrightarrow{AB}$$

$\hookrightarrow$  opposé

$$\overrightarrow{BD} - \overrightarrow{BA} = \overrightarrow{AB} + \overrightarrow{BD} = \overrightarrow{AD} : \text{relation de Chasles}$$

$$e) \overrightarrow{BD} + \overrightarrow{AD} + \overrightarrow{BA} = \overrightarrow{BD} + \overrightarrow{BA} + \overrightarrow{AD} = \overrightarrow{BD} + \overrightarrow{BD} : \text{relation de Chasles}$$

$$\overrightarrow{BD} + \overrightarrow{AD} + \overrightarrow{BA} = 2\overrightarrow{BD}$$

$$f) \overrightarrow{BD} - \overrightarrow{BA} + \overrightarrow{DA} - \overrightarrow{DB} = \overrightarrow{BD} + (-\overrightarrow{BA}) + \overrightarrow{DA} + (-\overrightarrow{DB})$$

$\hookrightarrow$  opposé  $\hookrightarrow$  opposé

$$\overrightarrow{BD} - \overrightarrow{BA} + \overrightarrow{DA} - \overrightarrow{DB} = \overrightarrow{BD} + \overrightarrow{AB} + \overrightarrow{DA} + \overrightarrow{BD}$$

$$\overrightarrow{BD} - \overrightarrow{BA} + \overrightarrow{DA} - \overrightarrow{DB} = \overrightarrow{BD} + \overrightarrow{DA} + \overrightarrow{AB} + \overrightarrow{BD}$$

$$\overrightarrow{BD} - \overrightarrow{BA} + \overrightarrow{DA} - \overrightarrow{DB} = \overrightarrow{BD} \text{ par 3 relations de Chasles.}$$