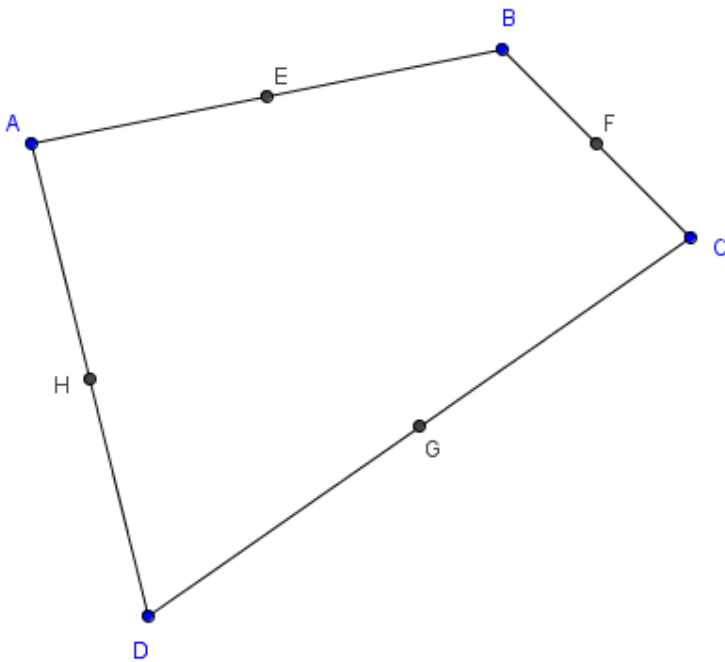


Vectors

The diagram shows the quadrilateral ABCD.

The point E is the midpoint of A and B. The point F is the midpoint of B and C.

The point G is the midpoint of C and D. The point H is the midpoint of D and A.



$$\overrightarrow{AB} = \mathbf{a} \quad \overrightarrow{BC} = \mathbf{b} \quad \overrightarrow{CD} = \mathbf{c}$$

1. Express in terms of \mathbf{a} , \mathbf{b} and/or \mathbf{c} :

$$\overrightarrow{DC} =$$

$$\overrightarrow{AD} =$$

2. Express in terms of \mathbf{a} , \mathbf{b} and/or \mathbf{c} :

$$\overrightarrow{HE} =$$

$$\overrightarrow{GF} =$$

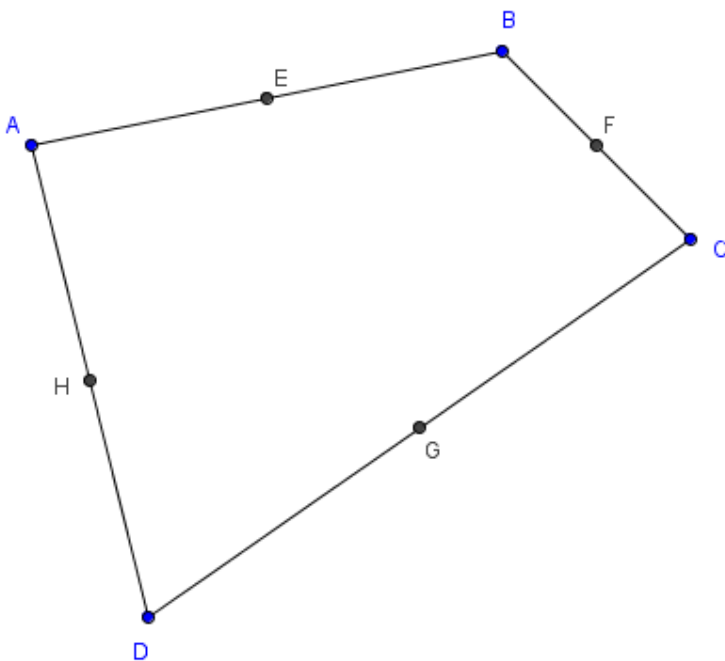
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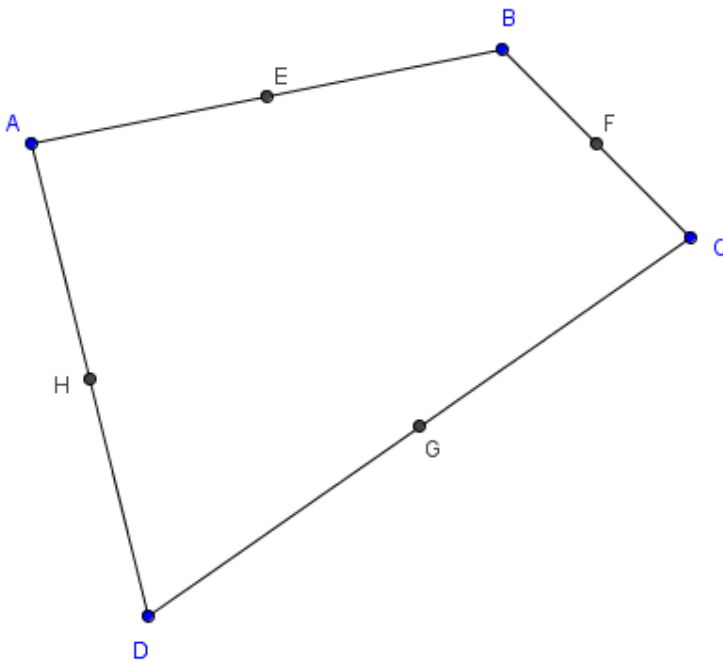
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$$\overrightarrow{AD} = \mathbf{a} + \mathbf{b} + \mathbf{c}$$

2. Express in terms of \mathbf{a} , \mathbf{b} and/or \mathbf{c} :

$$\overrightarrow{HE} = -\frac{1}{2}\overrightarrow{AD} + \frac{1}{2}\overrightarrow{AB} = -\frac{1}{2}\mathbf{b} - \frac{1}{2}\mathbf{c}$$

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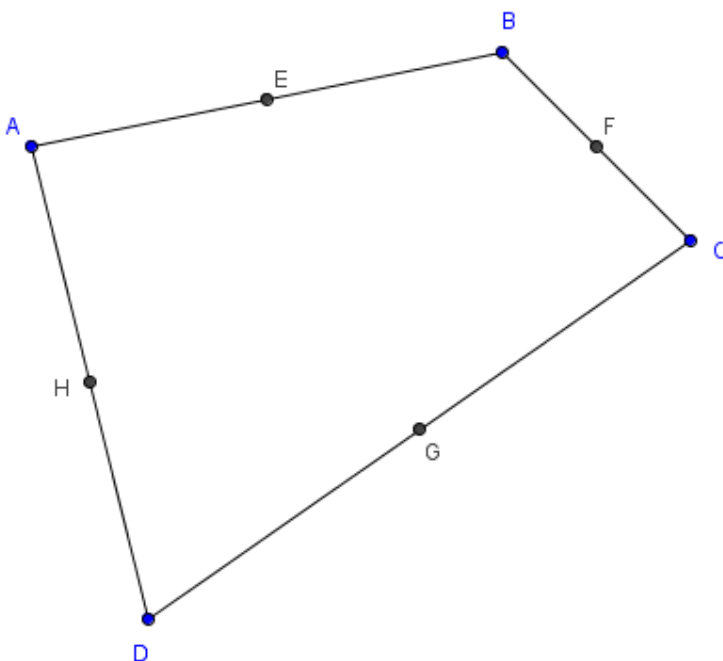
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