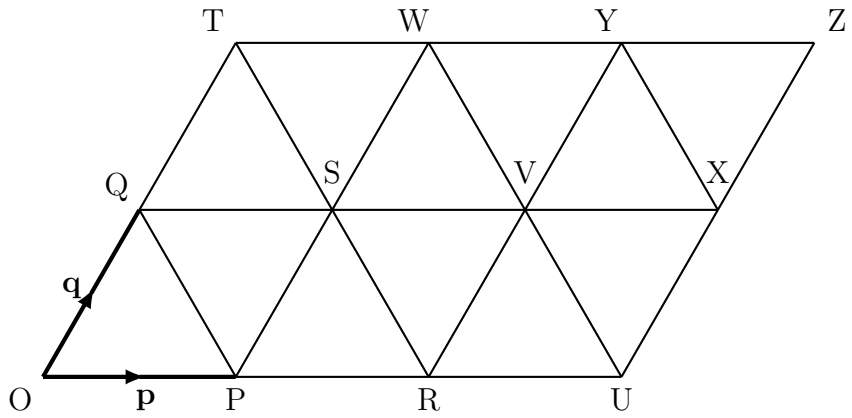
1. The diagram below shows 12 congruent triangles.



$\overrightarrow{OP} = \mathbf{p}$ {Handwriting **bold** is hard to do so mathematicians write $\underline{\text{p}}$ instead of $\mathbf{p}$}

$\overrightarrow{OQ} = \mathbf{q}$ {and write $\underline{\text{q}}$ instead of $\mathbf{q}$}

Find in terms of $\mathbf{p}$ and $\mathbf{q}$ the vectors

(i) $\overrightarrow{PU}$ = ... (ii) $\overrightarrow{PS}$ = ...

(iii) $\overrightarrow{RY}$ = ... (iv) $\overrightarrow{TY}$ = ...

(v) $\overrightarrow{OT}$ = ... (vi) $\overrightarrow{QX}$ = ...

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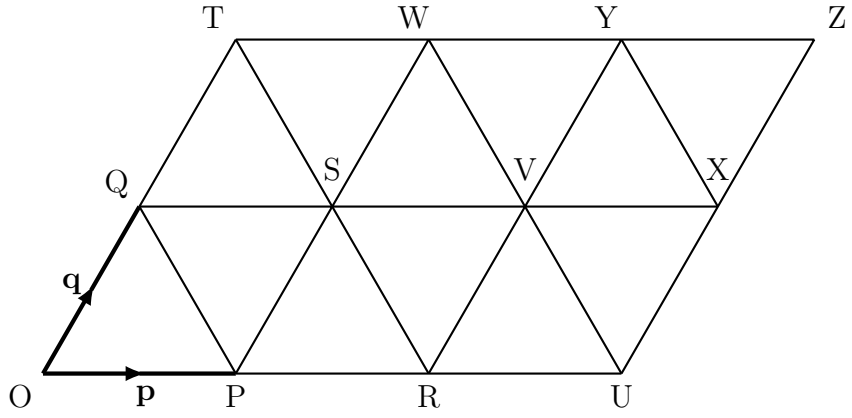

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2. The diagram below shows regular hexagon ABCDEF

O is the centre of the hexagon

$\overrightarrow{OA} = \mathbf{a}$

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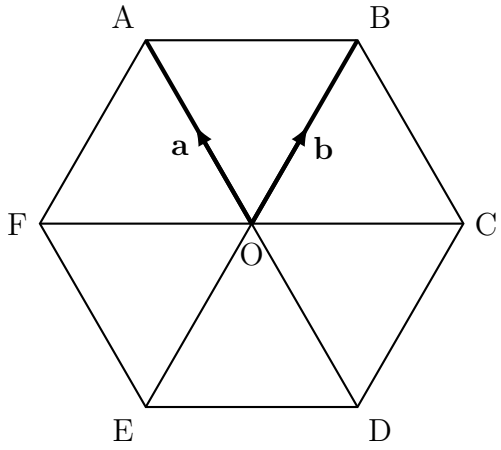

Write an expression, in terms of **a** and **b** for

(i) $\overrightarrow{DA}$ = ... (ii) $\overrightarrow{FA}$ = ...

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Answers 1 (i) 2**p** (ii) **q** (iii) 2**q** (iv) 2**p** (v) 2**q** (vi) 3**p**
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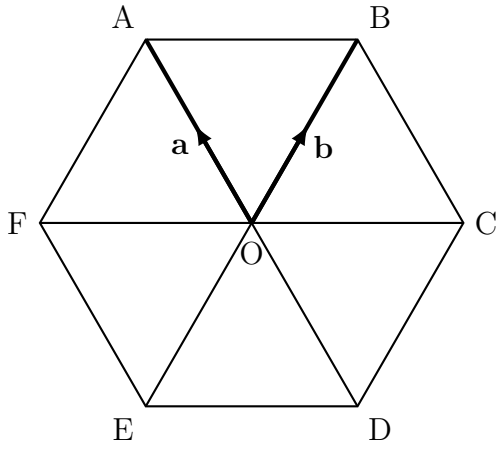

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