

# Chapter 1

## GCSE Revision Questions - Vectors

1.

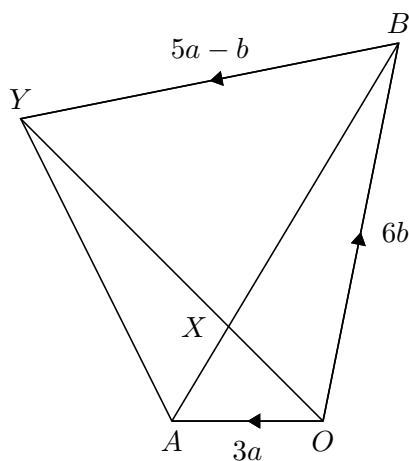


Diagram **NOT**  
accurately drawn

OAYB is a quadrilateral.  $\overrightarrow{OA} = 3\mathbf{a}$  and  $\overrightarrow{OB} = 6\mathbf{b}$ .

(a) Express  $\overrightarrow{AB}$  in terms of  $\mathbf{a}$  and  $\mathbf{b}$ . (1)

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$X$  is the point on  $AB$  such that  $AX : XB = 1 : 2$  and  $\overrightarrow{BY} = 5\mathbf{a} - \mathbf{b}$ .

(b) Prove that  $\overrightarrow{OX} = \frac{2}{5}\overrightarrow{OY}$ . (1)

2.

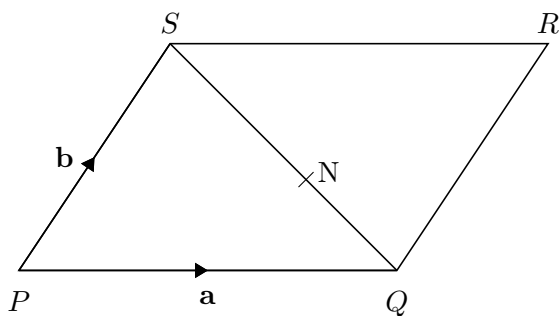


Diagram **NOT**  
accurately drawn

PQRS is a parallelogram.  $N$  is the point on  $SQ$  such that  $SN : NQ = 3 : 2$

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

$$\overrightarrow{PS} = \mathbf{b}$$

(a) Write down, in terms of  $\mathbf{a}$  and  $\mathbf{b}$ , an expression for  $\overrightarrow{SQ}$ . (1)

$\overrightarrow{SQ}$ .....

(b) Express  $\overrightarrow{NR}$  in terms of  $\mathbf{a}$  and  $\mathbf{b}$ . (3)

$\overrightarrow{NR}$ .....