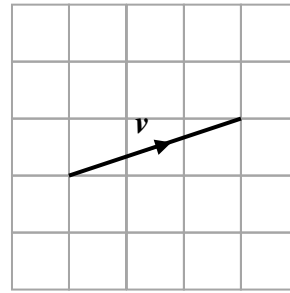
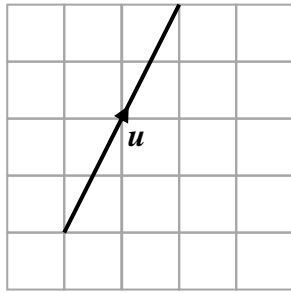


Mathematics (National 5) UASP 4(b) Revision Sheet

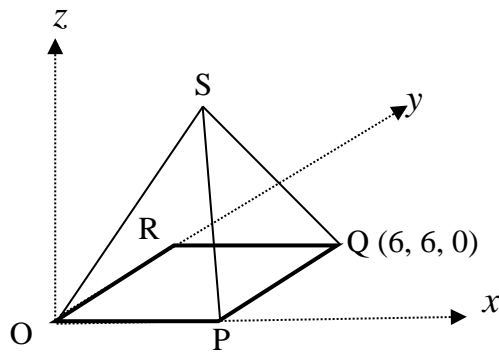
1. The diagrams below show 2 directed line segments u and v .



Draw the resultant of $3u + v$.

2. The diagram below shows a square based model of a glass pyramid of height 8 cm. Square OPQR has a side length of 6 cm.

The coordinates of Q are (6, 6, 0). R lies on the y -axis.



Write down the coordinates of S.

3. The forces acting on a body are represented by three vectors a , b and c as given below.

$$a = \begin{pmatrix} 5 \\ 2 \\ 2.5 \end{pmatrix} \quad b = \begin{pmatrix} -3 \\ 7 \\ 5.5 \end{pmatrix} \quad c = \begin{pmatrix} 1.5 \\ 6 \\ -2 \end{pmatrix}$$

Find the resultant force.

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4. Vector $\mathbf{p} = \begin{pmatrix} 5 \\ 3 \end{pmatrix}$ and vector $\mathbf{q} = \begin{pmatrix} 1 \\ -3 \end{pmatrix}$.

Calculate $|2\mathbf{p} + \mathbf{q}|$

5. Solve the equation $4\sin x^\circ - 1 = 0$, $0^\circ \leq x < 360^\circ$.