

National 5 Maths Magnitude of a Vector

SQA past paper and specimen paper questions and answers by topic

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National 5 Maths SQA 2015 Paper 2 Question 4



Find |u|, the magnitude of vector
$$\mathbf{u} = \begin{pmatrix} 6 \\ -13 \\ 18 \end{pmatrix}$$
. 2

Answer:

National 5 Maths SQA 2017 Specimen Paper 1 Question 3



Two forces acting on a rocket are represented by vectors \mathbf{u} and \mathbf{v} .

$$\mathbf{u} = \begin{pmatrix} \mathbf{2} \\ -\mathbf{5} \\ -\mathbf{3} \end{pmatrix} \text{ and } \mathbf{v} = \begin{pmatrix} \mathbf{7} \\ \mathbf{4} \\ -\mathbf{1} \end{pmatrix}.$$

Calculate $|\mathbf{u} + \mathbf{v}|$, the magnitude of the resultant force. Express your answer as a surd in its simplest form.

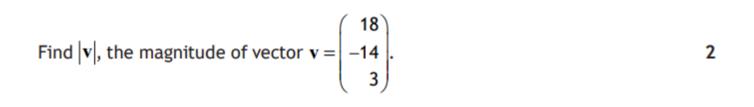
3

Answer:

 $7\sqrt{2}$

National 5 Maths SQA 2017 Paper 2 Question 1





Answer:

National 5 Maths SQA 2018 Paper 2 Question 3



Find
$$|\mathbf{r}|$$
, the magnitude of vector $\mathbf{r} = \begin{pmatrix} 24 \\ -12 \\ 8 \end{pmatrix}$. 2

Answer:

National 5 Maths SQA 2019 Paper 2 Question 2



Find
$$|\mathbf{p}|$$
, the magnitude of vector $\mathbf{p} = \begin{pmatrix} 6 \\ 27 \\ -18 \end{pmatrix}$. 2

Answer:

33

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National 5 Maths SQA 2021 Paper 1 Question 1



Calculate
$$|\mathbf{d}|$$
, the magnitude of vector $\mathbf{d} = \begin{pmatrix} 1 \\ -4 \\ 8 \end{pmatrix}$. 2

Answer: