

Exercise walk-through

5.1

Vectors

Pearson Edexcel · International GCSE · Mathematics A

Exercises 2.1·2.3

2.1 (Foundation) Find the x-component of $(4,1)+(1,3)$.

2.2 (Foundation) Find the magnitude of $(4,3)$.

2.3 (Foundation) Find the y-component of $(4,1)+(1,3)$.

3 Exam-style questions

Exercises 2.1·2.3

2.1 (Foundation) Find the x-component of $(4,1)+(1,3)$.

2.1 Add the x-components: $4+1=5$.

2.2 (Foundation) Find the magnitude of $(4,3)$.

2.2 Magnitude $=\sqrt{4^2+3^2}=5$.

2.3 (Foundation) Find the y-component of $(4,1)+(1,3)$.

3 Exam-style questions

2.3 Add the y-components: $1+3=4$.

Exercise 3.1

3.1 Decide whether this claim is true. Justify with a concrete calculation or counterexample: AB and BA always have the same components.

Exercise 3.1

3.1 Decide whether this claim is true. Justify with a concrete calculation or counterexample: $\overrightarrow{AB}$ and $\overrightarrow{BA}$ always have the same components.

3.1 False. $A=(1,2)$, $B=(5,5)$ give $\overrightarrow{AB}=(4,3)$ and $\overrightarrow{BA}=(-4,-3)$. Reversing direction negates the vector.

Local review guidance: show the chosen method; give the checked result; explain the condition or failed shortcut. This is authored classroom guidance.