**Iron Man Vectors - Answers**

Iron Man's suit has malfunctioned and will only travel in two directions and for a certain amount of time before it cuts out.

Iron Man can fly between O and A and that vector is a.

If he changes the suit's settings, he can fly from O to B and that vector is b.



Explain how Iron Man could complete these journeys using the letters a and b:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **O to D** | **A to E** | **O to C** | **B to E** | **B to D** |
| 2a | a - b | a + b | 2a – 2b | 2a - b |

Iron Man's repaired his suit but now it will only travel in a different two directions and for a certain amount of time before it cuts out.

He can do fractions of the distances by manually cutting the engine off.

Iron Man can fly between O and A and that vector is a.

If he changes the suit's settings, he can fly from O to B and that vector is b.



Explain how Iron Man could complete these journeys using the letters a and b:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **O to B** | **A to C** | **O to D** | **B to D** | **C to D** |
| a + b | b - a | ½a + ½b  | -½a - ½b | ½a - ½b |