**Description:** This problem asks students to find the components of graphed vectors; no trigonometry is involved.

Constants | Periodic Table

Shown is a 10 by 10 grid, with coordinate axes *x* and *y*
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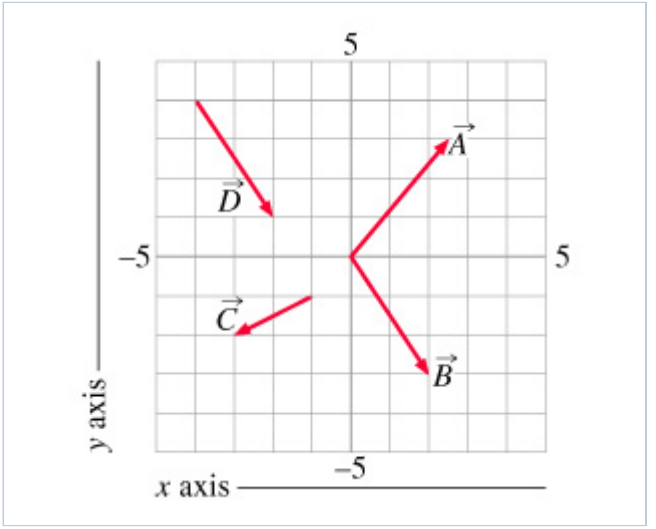
The grid runs from -5 to 5 on both axes. Drawn on this grid are four vectors, labeled $\vec{A}$ through $\vec{D}$. This problem will ask you various questions about these vectors. All answers should be in decimal notation, unless otherwise specified.




## Part A

What is the *x* component of $\vec{A}$?

**Express your answer to two significant figures.**

▸ **View Available Hint(s)** (1)

ANSWER:

$A_x$ = 2.5

## Part B

What is the *y* component of $\vec{A}$?

**Express your answer to the nearest integer.**

ANSWER:

$A_y$ = 3

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**Part C**

What is the *y* component of $\vec{B}$?

**Express your answer to the nearest integer.**

▸ **View Available Hint(s)** (1)

ANSWER:

$B_y$ = -3

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**Part D**

What is the $x$ component of $\vec{C}$?

**Express your answer to the nearest integer.**

▸ **View Available Hint(s)** (1)

ANSWER:

$C_x$ = -2

The following questions will ask you to give both components of vectors using the ordered pairs method. In this method, the *x* component is written first, followed by a comma, and then the *y* component. For example, the components of $\vec{A}$ would be written 2.5,3 in ordered pair notation.

The answers below are all integers, so estimate the components to the nearest whole number.

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**Part E**

In ordered pair notation, write down the components of vector $\vec{B}$.

**Express your answers to the nearest integer.**

ANSWER:

$B_x, B_y$ = 2, -3

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**Part F**

In ordered pair notation, write down the components of vector $\vec{D}$.

**Express your answers to the nearest integer.**

ANSWER:

$D_x, D_y$ = 2, -3

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**Part G**

What is true about $\vec{B}$ and $\vec{D}$? Choose from the pulldown list below.

ANSWER:

- ○ They have different components and are not the same vectors.
- ○ They have the same components but are not the same vectors.
- ◉ They are the same vectors.
- ○