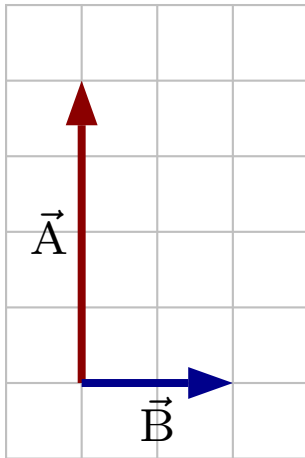
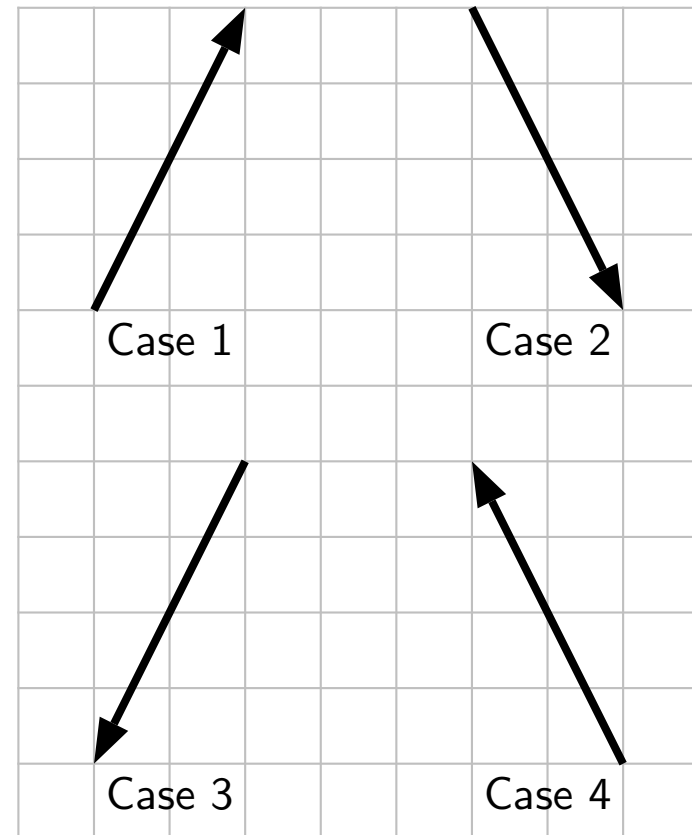


# Question 1

Consider the two vectors  $\vec{A}$  and  $\vec{B}$  as illustrated.

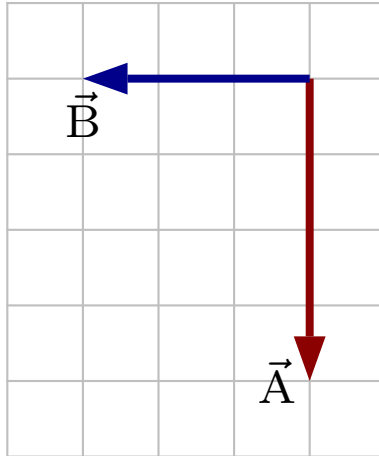


Which of the following best represents  $\vec{A} + \vec{B}$ ?



## Question 2

Consider the two vectors  $\vec{A}$  and  $\vec{B}$  as illustrated.



Which of the following is the magnitude of  $\vec{C} = \vec{A} + \vec{B}$ ?

1.  $C = 3$
2.  $C = -3$
3.  $C = 4$
4.  $C = 5$
5.  $C = -5$
6.  $C = 7$

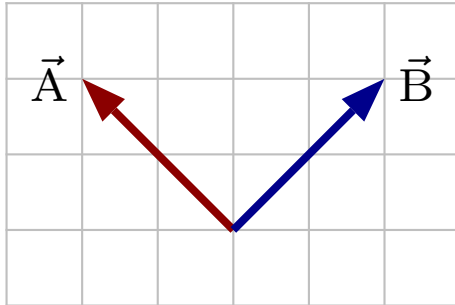
## Warm Up Question 1

Two displacement vectors have magnitude 10 m. Vector  $\vec{A}$  points left and vector  $\vec{B}$  points right. Let the vector  $\vec{D} = \vec{A} - \vec{B}$ . Is  $\vec{D}$  zero or not? If not, what is the direction of  $\vec{D}$ ?

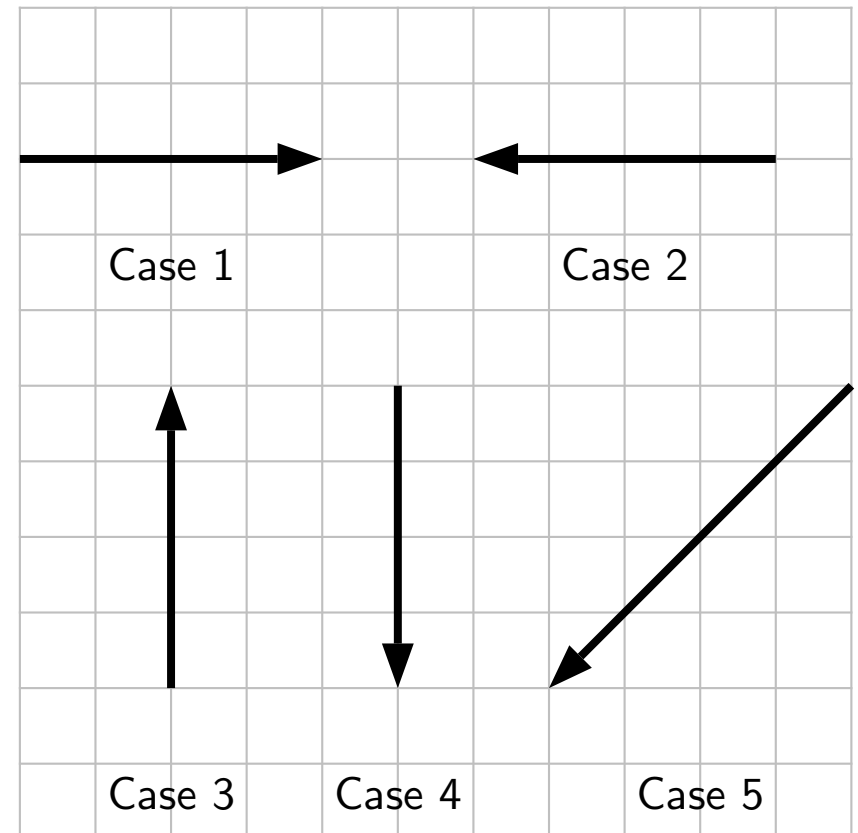
1. Zero. Since  $10\text{ m} - 10\text{ m} = 0\text{ m}$ .
2. Not zero. Points left. Subtraction gives negative.
3. Not zero. Points left.  $\vec{B}$  flips direction.
4. Not zero. Points right. Subtraction gives positive.

## Question 3

Consider the two vectors  $\vec{A}$  and  $\vec{B}$  as illustrated.

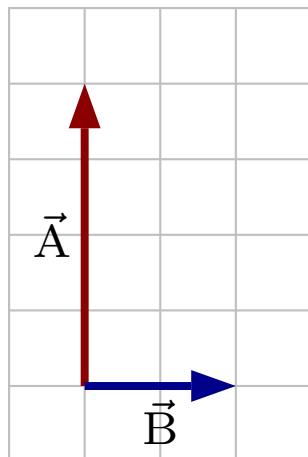


Which of the following best represents  $\vec{A} - \vec{B}$ ?

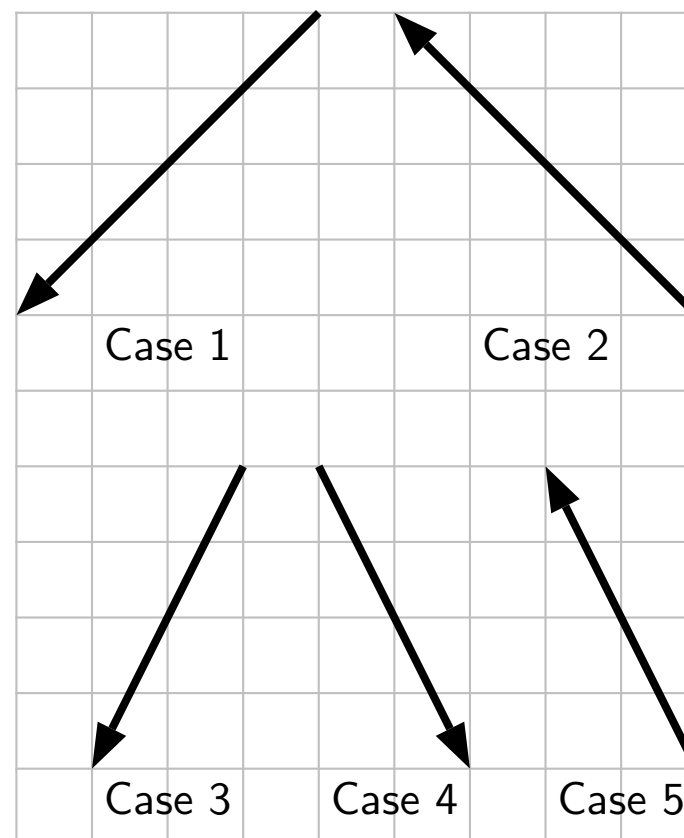


## Question 4

Consider the two vectors  $\vec{A}$  and  $\vec{B}$  as illustrated.



Which of the following best represents  $\vec{A} - 2\vec{B}$ ?



## Warm Up Question 2

A vector has a negative  $x$  component and a positive  $y$  component. Using the angle measured counterclockwise from the positive  $x$  axis, which of the following is a possible angle for the vector? a) from  $0^\circ$  to  $90^\circ$ , b) from  $90^\circ$  to  $180^\circ$ , c) from  $180^\circ$  to  $270^\circ$  and d) from  $270^\circ$  to  $360^\circ$  Explain your answer.

1. Option a).
2. Option b).
3. Option c).
4. Option d).