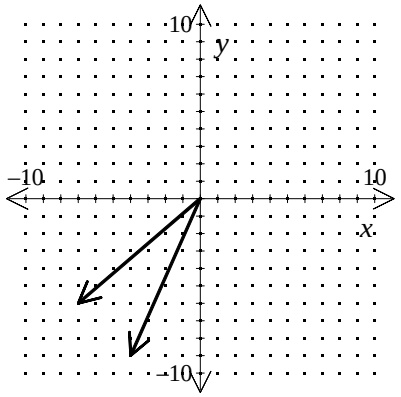
NAME:_____

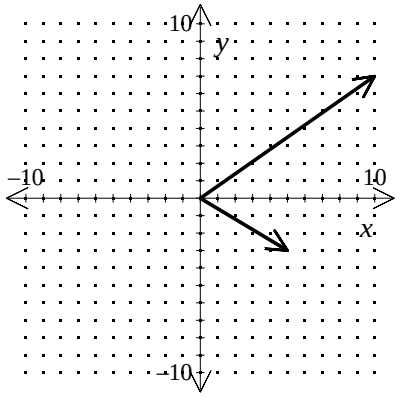
1. Find the sum of the pair of vectors. Express your answer in ordered pair form.



[A] $\langle -11, -15 \rangle$ [B] $\langle 3, -15 \rangle$

[C] $\langle 3, -3 \rangle$ [D] $\langle -11, -3 \rangle$

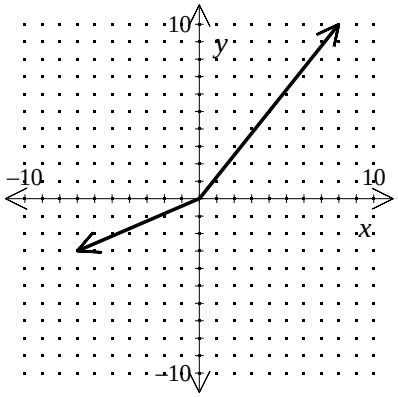
2. Find the sum of the pair of vectors. Express your answer in ordered pair form.



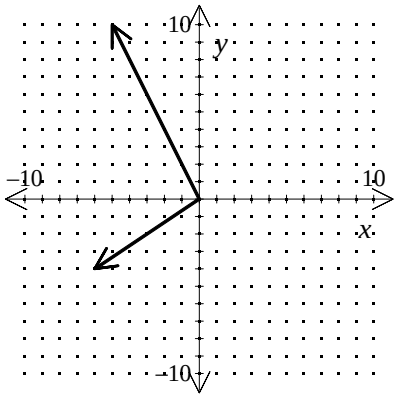
[A] $\langle -5, 4 \rangle$ [B] $\langle 15, 4 \rangle$

[C] $\langle -5, -10 \rangle$ [D] $\langle 15, -10 \rangle$

3. Find the sum of the pair of vectors. Express your answer in ordered pair form.



4. Find the sum of the pair of vectors. Express your answer in ordered pair form.



NAME:_____

5. A plane with a cruising speed in still air of 400 mi/h is headed due east. It encounters a wind of 50 mi/h blowing 20° north of west. Express the vectors in ordered pair notation and find their sum.

   [A] ⟨400, 0⟩; ⟨–38.3, –47.0⟩; ⟨361.7, –47.0⟩ [B] ⟨400, 0⟩; ⟨–47.0, 17.1⟩; ⟨353.0, 17.1⟩

   [C] ⟨0, 400⟩; ⟨–38.3, –47.0⟩; ⟨353.0, 17.1⟩ [D] ⟨0, 400⟩; ⟨–47.0, 17.1⟩; ⟨–47.0, 417.1⟩

6. While flying due east at 126 km/h, an airplane is also carried northward at 32 km/h by the wind blowing due north. What is the plane's resultant velocity?

7. Graph the vectors $\langle 4, -2 \rangle$ and $\langle -3, 5 \rangle$ and find the resultant vector using the head-to-tail method and the ordered pair method.

8. A plane flies north at 120 mi/h. The wind is blowing due east at 30 mi/h. Find the magnitude and direction of the resultant vector.

9. Where on the earth would a helicopter be if it first flew south 10 km, then west 10 km, and north 10 km, ending at the point at which it started?

[1] A

[2] B

[3] $\langle 1,\ 7 \rangle$

[4] $\langle -11,\ 6 \rangle$

[5] B

[6] 130 km/h

[7] $\langle 1,\ 3 \rangle$

[8] about 123.7 mi/h, 14° east of north

[9] the North Pole