

_____ LT41: I can find direction and magnitude of a resultant vector.

1. a. Write the ordered pair that represents the vector from A (3, -1) to B (-1, -7).

- b. What is the magnitude of \overrightarrow{AB} ?

_____ LT44: I can add, subtract, multiply, and find the magnitude of vectors algebraically.

For #2 & 3, find an ordered pair to represent \vec{u} using $\vec{v} = \langle 2, -4 \rangle$ and $\vec{w} = \langle 1, 5 \rangle$.

2. $\vec{u} = 3\vec{v} - 2\vec{w}$

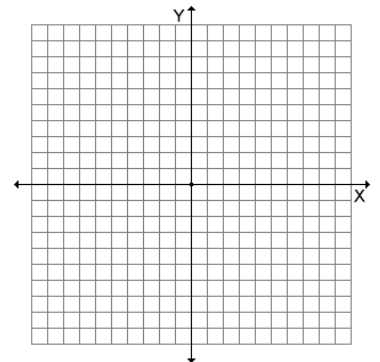
3. $\vec{u} = \frac{1}{2}\vec{v} - 4\vec{w}$

4. What is the magnitude and direction of the resultant of a 180-newton force along the x-axis and a 120-newton force at an angle of 75° to one another?

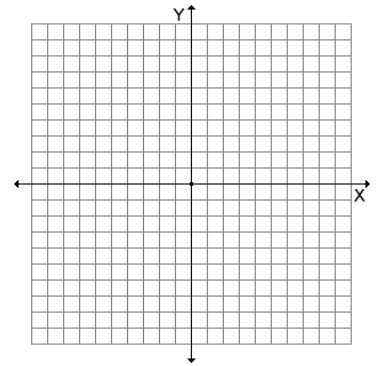
5. What is the magnitude and direction of the resultant of a 68-newton force along the x-axis and a 54-newton force at an angle of 120° to one another?

_____ LT42: I can write vector and parametric equations of lines.

6. Write the parametric equations of the line that passes through P(-3, 2) and is parallel to $\vec{q} = \langle -2, 6 \rangle$ and graph it.



7. Write the parametric equations of the line that passes through $P(1, -4)$ and is parallel to $\vec{q} = \langle 2, -5 \rangle$ and graph it.



8. Write an equation in slope-intercept form of the line with the given parametric equations:

$$x = -t + 6 \text{ and } y = 2t - 4$$

9. Write an equation in slope-intercept form of the line with the given parametric equations:

$$x = -3t - 8 \text{ and } y = -2t + 9$$

_____ *LT43: I can find initial horizontal and vertical velocity.*

10. Find the initial horizontal and vertical velocity for a soccer ball that is kicked with an initial velocity of 45 feet per second at an angle of 32° with the ground.