

Find the resultant:

1. Use tape to construct two lines that are each 60 cm long and perpendicular to each other. The ends of each vector must meet at the same point.

Resultant magnitude = _____

Resultant angle = _____

2. Use tape to construct two lines. One will be 80 cm long and the other 40 cm. Again, they will be perpendicular and the ends of each vector will meet at the same point.

Resultant magnitude = _____

Resultant angle = _____

Find the components:

Within your group, agree on a set of axes amongst the tiles on the floor. Then draw with tape and find the components for:

3. A vector of 71 cm at 46° E of S

Component A mag = _____ Component A angle = _____

Component B mag = _____ Component B angle = _____

4. A vector of 58 cm at 17° N of W

Component A mag = _____ Component A angle = _____

Component B mag = _____ Component B angle = _____

5. A vector of 63 cm at 73° W of S

Component A mag = _____ Component A angle = _____

Component B mag = _____ Component B angle = _____

6. A vector of 41 cm at 51° E of N

Component A mag = _____ Component A angle = _____

Component B mag = _____ Component B angle = _____

Analysis/Calculations:

1. Determine the resultants for 1 and 2 by making a drawing and using trigonometry.
2. Determine the components for 3-6 by making a drawing and using trigonometry.

Conclusion:

In a paragraph, describe why there were differences between what you calculated by hand and what you measured on the floor.