

An electric field of 11.2 N/C directed due north is superposed on an existing electric field of 16.3 N/C directed due east. What is the magnitude of the resultant field

Answer:

The vector sum of the individual electric field is 19.8 N/C

Explanation:

The principle of superposition states that every charge in space creates an electric field at point independent of the presence of other charges in that medium.

The resultant electric field is a vector sum of the electric field due to individual charges.

Let the electric field directed due north = N

Also, Let the electric field directed due east = E

then the resultant field = R

Given;

An electric field directed due north, N = 11.2 N/C

$$R^2 = N^2 + E^2$$

$$R = \sqrt{N^2 + E^2}$$

$$R = \sqrt{11.2^2 + 16.3^2}$$

$$R = 19.8 \text{ N/C}$$

Therefore, the vector sum of the individual electric field is 19.8 N/C

A material condition used to indicate that a specified geometric tolerance applies at each increment of size of a feature within its limits of size is called ____.

A rocket in orbit just above the atmosphere is moving in uniform circular motion. The radius of the circle in which it moves is 6.381×10^6 m, and its centripetal acceleration is 9.8 m/s^2 . What is the speed of the rocket?

A steak and lobster dinner is considered to be a _____ food

Poem about what happened to Lulu 1..what excuse does the mother give as an answer to the persona question

What do you think were the benefits of improving transportation to the West?

Oceans and lakes are part of the? A. Atmosphere
B. Hydrosphere
C. Lithosphere
D. Biosphere

The following sentence contains _____. The Christian follows Christ's example in serving others.

Find the length of a radius of the circle the radius is 4.6 cm

If photosynthesis captures only 1-2% of the energy from sunlight, what happens to the other 98-99% of energy

Which is not an accurate definition for history? A. an account of the impact of human behavior on the environment B. the story of change over time documented with evidence C. an explanation of the past through the telling of stories of what actually happened and why

Why is a conclusion so important to an argumentative essay?

Rotate 90 degrees clockwise around the origin (-6,-2) (-3,1) (-1,1) (2,-4)

a submarine at the water's surface dropped down 100 ft after thirty minutes at that depth it dove an additional 500 ft what was its depth after the second dive

Who commissioned the building of the Colosseum

Where does surface water collect if it does not flow to the ocean? A. glacier B. wetland C. subduction zones D. alluvial fans

What was the connection between the Three-Fifths Compromise and taxes? A) Three out of every five slaves were taxed.
B) Three-fifths of all slaves were counted to figure how much states owed the federal government in taxes
C) Three out of every five slaves were exempt from taxes
D) Three-fifths of all slaves were counted to figure how much the federal government owed states in taxes

In the beginning of the essay "lifeboat ethics", what subject do environmentalists use as a metaphor for the earth?

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