## Answer on Question #45717 – Physics – Electromagnetism

Question: It is NOT possible for two magnetic field lines to cross because

- a) two magnets cannot contribute to the field;
- b) the field would have to be infinite;
- c) the field cannot have two different directions;
- d) the magnetic potential energy would have to be infinite.

**Solution:** magnetic field lines are just a representation of the field itself. They show us where the field is pointing at any chosen point in space. Now if the lines cross, that would mean that the field at the crossing point is pointing in two different directions, which would be contradicting our original idea.

## Answer:

c) the field cannot have two different directions.

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