# Vector Test Question Bank

1. Vector has initial point and terminal point . Write the vector in component form and sketch it on the graph paper below.
2. Vector has initial point and terminal point . Determine if and are equivalent.
3. Let and and . Find
4. Given , find
5. Given ,
6. find a unit vector in the direction of
7. find a vector in the direction with length 10
8. find a vector parallel to
9. find a vector perpendicular to
10. Determine if and are parallel, perpendicular, or neither.
11. , $ = ,3$
12. ,
13. ,
14. Given vector , determine the angle makes with the positive axis.
15. If vector has magnitude 12 and makes an angle of with the positive axis, find the components of and write as .
16. If vector has length 20 and makes a angle with the positive axis, find the and components of .
17. If two tugboats pull a ship, one with a force of applied at an angle of N of E, and one with a force of applied at an angle of N of W, find the resultant force vector acting on the cruise ship. Write the vector in component form and also as a magnitude/angle.