

1. Give two examples of scalar quantities: _____; _____
2. Give two examples of vector quantities: _____; _____
3. _____ quantities have magnitude only. Magnitude is expressed by a _____ and a _____.
4. Vector quantities have _____ and _____
5. Vectors may be represented by _____, with the magnitude shown by the _____.
6. One vector having the same effect as two or more vectors combined is a _____ vector.
7. To find the resultant of two component vectors acting in the same direction, _____.
8. To find the resultant of two component vectors acting in opposite directions, _____.
9. Identify the following quantities as vector or scalar:
 - a. 5.0 m/s South _____
 - b. 32 n upward _____
 - c. 7.4 g _____
 - d. 132.4 °C _____

Use math to solve these problems:

1. What is the resultant of two component vectors of 78.3 units W and 15.2 units N?

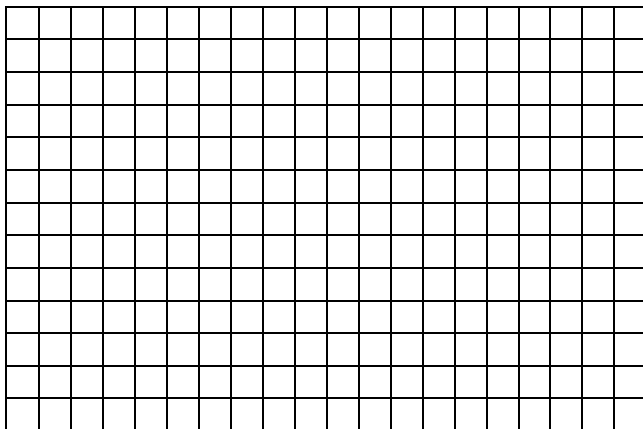
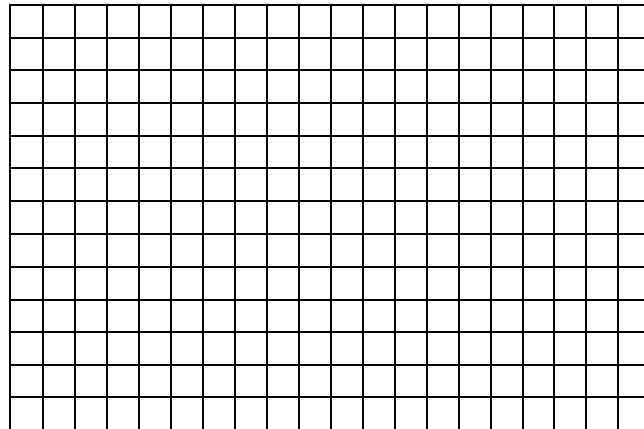
2. An airplane flies southward with a velocity of 922 km/h. There is a brisk tailwind (meaning blowing on the tail of the plane) with a velocity of 25 km/h. What is the resultant velocity of the plane?

- 3. Calculate the components of a resultant vector of 804 units, 17° W of S.

- 4. A person can row a boat 6.93 km/h in still water. If the person rows directly west across a river that flows north at 5.00 km/h, what is the magnitude and direction of the resultant velocity?

Use the head-to-tail method to solve the following:

- 1. A car travels 150 km east before turning and traveling 275 km north. What is the car's displacement?



- 2. A student walks 15 paces West then 7 paces South then 8 paces East and finally 5 paces North. What is the resultant from the start to the finish?